



# FortiClient v5.0 Patch Release 5 Administration Guide



## FortiClient v5.0 Patch Release 5 Administration Guide

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# Change Log

Date	Change Description
2012-11-02	Initial release.
2012-11-07	Updated scripts chapters. This document is now inclusive of both Windows and Mac OS X. It is important to note that not all features available for Windows are available for Mac OS X.
2012-11-15	Updated IPsec and SSL VPN chapter.
2012-11-22	Added note about FortiClient License for FortiAuthenticator.
2012-11-27	Updated script commands to match changes in the <i>FortiClient v5.0 XML Reference</i> .
2013-01-09	Updated for FortiClient v5.0 Patch Release 1. Removed XML chapter, see to the <i>FortiClient v5.0 XML Reference</i> for more information. Removed FortiClient Tools chapter, see the <i>FortiClient v5.0 Patch Release 1 Release Notes</i> for more information.
2013-04-05	Updated for FortiClient v5.0 Patch Release 2. Added new chapter for SCCM 2012.
2013-04-29	Updated for FortiClient v5.0 Patch Release 3.
2013-05-27	Fixed typographic error.
2013-06-12	Updated for FortiClient v5.0 Patch Release 4.
2013-08-21	Updated for FortiClient v5.0 Patch Release 5.

# Introduction

FortiClient has been completely re-designed for v5.0. FortiClient provides a comprehensive network security solution for endpoints while improving your visibility and control. FortiClient allows you to manage the security of multiple endpoint devices from the FortiGate interface. This document provides an overview of FortiClient v5.0.



This document was written for FortiClient (Windows) v5.0 Patch Release 5. Not all features described in this document are supported for FortiClient (Mac OS X) v5.0 Patch Release 5.

## FortiClient features

The following table provides a feature comparison between the standalone client (free version) and the managed client (licensed).

**Table 1:** FortiClient feature comparison

Standalone Client (Free Version)	Managed Client (Licensed)
Real-time antivirus protection. Protects against viruses, rootkits, and malware. Grayware options to block adware and riskware.	Real-time antivirus protection. Protects against viruses, rootkits, and malware. Grayware options to block adware and riskware.
Parental Control. Web category filtering including search engine safe search and YouTube education filter.	Web Filter. Web category filtering including search engine safe search and YouTube education filter.
Remote Access. Configure SSL VPN and IPsec VPN tunnels. Supports client certificates, X.509 certificates, and two-factor authentication.	Remote Access. Configure SSL VPN and IPsec VPN tunnels. Supports client certificates, X.509 certificates, and two-factor authentication.
	Application Firewall. Configure an application sensor and filters to allow or block specific applications.
	Vulnerability Scan. Scan the system for known vulnerabilities. Link to FortiGuard with information on the impact and recommended actions.
	Centralized client management and monitoring. Requires a FortiGate device.
	Centralized configuration provisioning and deployment.

**Table 1:** FortiClient feature comparison (continued)

Standalone Client (Free Version)	Managed Client (Licensed)
	Enforcement of enterprise security policies.
Logging. Enable logging for the following features: VPN, AntiVirus, Parental Control, and Update. View logs locally.	Logging. Enable logging for the following features: VPN, Application Firewall, AntiVirus, Web Filter, and Update. View logs locally or send logs to a FortiAnalyzer or FortiManager.

## Licensing

Licensing on the FortiGate is based on the number of registered clients. FortiGate 30D series and higher models support ten (10) free managed FortiClient licenses. For additional managed clients, an upgraded license must be purchased. The maximum number of managed clients varies per device model.

### Client limits

The following table shows client limits per FortiGate model series:

**Table 2:** FortiClient license upgrade

FortiGate Series	Free registrations	FortiClient license upgrade SKU
FortiGate/FortiWiFi 30D series	10	No upgrade license.
FortiGate/FortiWiFi 40 series	10	No upgrade license.
FortiGate/FortiWiFi 60C, 60D, 80C, 90D series	10	200 client registrations FCC-C0102-LIC
FortiGate 100, 200, 300, 600, 800 series, VM01/VM01-XEN, VM02/VM02-XEN	10	2000 client registrations FCC-C0103-LIC
FortiGate 1000, 3000, 5000 series, VM04/VM04-XEN, VM08/VM08-XEN	10	8000 client registrations FCC-C0105-LIC



In high availability (HA) configurations, all cluster members require an upgrade license key.



For more information, go to [www.forticlient.com](http://www.forticlient.com).



## Installation information

The following table lists operating system support and the minimum system requirements.

**Table 3:** Installation information

Operating System Support	Minimum System Requirements
<ul style="list-style-type: none"><li>• Microsoft Windows 8 (32-bit and 64-bit)</li><li>• Microsoft Windows 7 (32-bit and 64-bit)</li><li>• Microsoft Windows Vista (32-bit and 64-bit)</li><li>• Microsoft Windows XP (32-bit)</li></ul>	<ul style="list-style-type: none"><li>• Microsoft Internet Explorer version 8 or later</li><li>• Microsoft Windows compatible computer with Intel processor or equivalent</li><li>• Compatible operating system and minimum 512MB RAM</li><li>• 600MB free hard disk space</li><li>• Native Microsoft TCP/IP communication protocol</li><li>• Native Microsoft PPP dialer for dial-up connections</li><li>• Ethernet NIC for network connections</li><li>• Wireless adapter for wireless network connections</li><li>• Adobe Acrobat Reader for documentation</li><li>• MSI installer 3.0 or later.</li></ul>
<ul style="list-style-type: none"><li>• Mac OS X v10.8 Mountain Lion</li><li>• Mac OS X v10.7 Lion</li><li>• Mac OS X v10.6 Snow Leopard</li></ul>	<ul style="list-style-type: none"><li>• Apple Mac computer with an Intel processor</li><li>• 256MB of RAM</li><li>• 20MB of hard disk drive (HDD) space</li><li>• TCP/IP communication protocol</li><li>• Ethernet NIC for network connections</li><li>• Wireless adapter for wireless network connections</li></ul>

## Language support

The following table lists FortiClient language support information.

**Table 4:** Language support

Language	Graphical User Interface	XML Configuration	Documentation
English (United States)	✓	✓	✓
French (France)	✓	-	-
German	✓	-	-
Portuguese (Brazil)	✓	-	-
Spanish (Spain)	✓	-	-
Chinese (Simplified)	✓	-	-

**Table 4:** Language support (continued)

Language	Graphical User Interface	XML Configuration	Documentation
Chinese (Traditional)	✓	-	-
Japanese	✓	-	-
Korean	✓	-	-



Please review the [FortiClient v5.0 Patch Release 5 \(Windows\) Release Notes](#) or the [FortiClient v5.0 Patch Release 5 \(Mac OS X\) Release Notes](#) prior to upgrading. Release Notes are available at the [Customer Service & Support](#) portal.



FortiClient language is dependent on the regional settings on the client workstation. When the regional language setting is not supported, FortiClient defaults to English. When configuring language in the XML configuration file, the language setting overrides the regional language settings of the client workstation.

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# What's New in FortiClient v5.0

## Summary of enhancements

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This document was written for FortiClient (Windows) v5.0 Patch Release 5. Not all features described in this document are supported for FortiClient (Mac OS X) v5.0 Patch Release 5.

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The following is a list of enhancements in FortiClient v5.0.

### **FortiClient (Windows) v5.0 Patch Release 5**

- Enhanced file copy performance
- Customized installation: Users may choose to install the entire FortiClient feature set or only the VPN features
- Scan for viruses and malware on the target system before installing FortiClient
- Enhanced GUI performance

### **FortiClient (Windows) v5.0 Patch Release 4**

- Assign endpoint control profiles based on Active Directory group  
Requires a FortiGate running FortiOS v5.0 Patch Release 3 or later  
On a system using Active Directory (AD) for user account verification, FortiClient will send the AD user name and group to the FortiGate during Endpoint Control (EC) registration. The FortiGate may be configured to select the correct EC profile by user or group.
- Display endpoint control profile details in registration dialog box  
Requires a FortiGate running FortiOS v5.0 Patch Release 3 or later
- Removed Vulnerability Scan (VCM) and Application Firewall for standalone users  
Requires a FortiGate running FortiOS v5.0 Patch Release 2 or later  
FortiGate administrators may choose to display these two features (on FortiClient) for users registered to the FortiGate.
- Enhanced how the list and status of FortiGates are displayed for endpoint control registration

### **FortiClient (Windows) v5.0 Patch Release 3**

- Enhancements to FortiProxy
- Improved VPN usability with FortiToken

### **FortiClient (Windows) v5.0 Patch Release 2**

- Customizable console for registered clients
- Endpoint control registration with redundant gateways  
Enables roaming clients
- Enhancement to the remembered FortiGates feature
- FortiClient uploads traffic, event, and vulnerability scan logs to FortiAnalyzer/FortiManager  
Requires a FortiAnalyzer/FortiManager device running v5.0 Patch Release 2 or later and a FortiGate device running v5.0 Patch Release 2 or later. In this release FortiClient logs are

stored only. Support to view logs and create reports based on FortiClient logs will be added in a future release.

- SSL VPN realm support (command line only)
- Updated OpenSSL to 1.0.1e
- Synchronize VPN elements; *save password*, *auto connect*, and *always up*; with the FortiGate. Requires a FortiGate running FortiOS v5.0 Patch Release 2 or later.

- Web category filtering safe search support

For popular search sites or portals including Google, Bing, Yahoo!, and Yandex.

### **FortiClient (Windows) v5.0 Patch Release 1**

- Endpoint Control registration over SSL VPN or IPsec VPN
- Remember multiple FortiGates for Endpoint Control registrations
- FortiClient console improvements

### **FortiClient (Windows) v5.0.0**

- Antivirus and Antimalware  
Protection against the latest virus, grayware (adware/riskware) threats.  
Client antivirus is free, and auto updates every three hours.
- Application firewall  
Block, allow, and monitor applications that send traffic to the network.
- Bring Your Own Device (BYOD)
- Diagnostic tool
- Enhancements to the FortiClient console
- Endpoint Management using FortiGate, including:  
Automatic endpoint registration. User initiated endpoint registration.  
Deploy VPN (IPsec/SSL) configuration  
Enable/disable antivirus real-time protection.  
Manage/deploy web filtering and application firewall configuration.
- Localization support
- Parental Control/Web Filter  
Block, allow, warn, and monitor web traffic based on category.
- Remote Access (IPsec and SSL VPN)  
Secure Virtual Private Network access to your network.  
Supports multiple gateways for a single tunnel.
- Rootkit detection and removal
- Single Sign-On Mobility agent support with FortiAuthenticator/FSSO collector agent
- Support automatic executing of a custom batch script via an IPsec VPN tunnel
- Support multiple (maximum 10) gateway IP/FQDN in a single IPsec VPN configuration
- Support XML configuration
- VPN from system tray
- VPN auto connect/always up  
Support ability to automatically connect to a VPN tunnel without user interaction  
Support ability to configure the VPN to always be connected

- Vulnerability scan  
Identify system and application vulnerabilities.

#### **FortiClient (Mac OS X) v5.0 Patch Release 5**

- Customized installation: Users may choose to install the entire FortiClient feature set, or just the VPN.

#### **FortiClient (Mac OS X) v5.0 Patch Release 4**

- Assign endpoint control profiles based on Active Directory group  
Requires a FortiGate running FortiOS v5.0 Patch Release 3 or later  
On a system using Active Directory (AD) for user account verification, FortiClient will send the AD user name and group to the FortiGate during endpoint control (EC) registration. The FortiGate may be configured to select the correct EC profile by user or group.
- Display endpoint control profile details in registration dialog box  
Requires a FortiGate running FortiOS v5.0 Patch Release 3 or later
- Removed Vulnerability Scan (VCM) and Application Firewall for standalone users  
FortiGate administrators may choose to display these two features (on FortiClient) for users registered to the FortiGate.
- Enhanced how the list and status of FortiGates are displayed for Endpoint Control registration

#### **FortiClient (Mac OS X) v5.0 Patch Release 3**

- Improved VPN usability with FortiToken

#### **FortiClient (Mac OS X) v5.0 Patch Release 2**

- Customizable console for registered clients
- Endpoint control registration with redundant gateways (maximum 20)  
Enables roaming clients.
- Enhancements to the remembered FortiGates feature
- FortiClient uploads traffic and vulnerability scan logs to FortiAnalyzer/FortiManager  
Requires a FortiAnalyzer/FortiManager device running v5.0 Patch Release 2 or later and a FortiGate device running v5.0 Patch Release 2 or later.
- FortiClient console improvements
- FortiClient traffic logging
- Improved VPN controller reliability
- Silent registration element added to the `endpoint_control` section in the XML configuration file.
- Synchronize VPN elements; `save password`, `auto connect`, and `always up`; with the FortiGate.  
Requires a FortiGate running FortiOS v5.0 Patch Release 2 or later.
- Web category filtering safe search support  
For popular search sites or portals including: Google, Bing, Yahoo!, and Yandex.

#### **FortiClient (Mac OS X) v5.0 Patch Release 1**

- Remember multiple FortiGates for Endpoint Control registrations
- Endpoint Control registration over SSL VPN and IPsec VPN
- Improvements to the FortiClient GUI
- Splash screen
- VPN resiliency

## **FortiClient (Mac OS X) v5.0.0**

- AntiVirus and Antimalware  
Protection against the latest virus, grayware (adware/riskware) threats.  
Client antivirus is free, and auto updates every three hours.
- Application Firewall  
Block, allow, and monitor applications that send traffic to the network.
- Bring Your Own Device (BYOD)
- Diagnostic Tool
- Enhancements to the FortiClient dashboard
- Endpoint Management using FortiGate, including:  
Automatic endpoint registration. User initiated endpoint registration.  
Deploy VPN (IPsec/SSL) configuration  
Enable/disable AntiVirus real-time protection.  
Manage/deploy Web Filtering and Application Firewall configuration.
- Localization support
- Parental Control/Web Filter  
Block, allow, warn, and monitor web traffic based on category.
- Remote Access (IPsec and SSL VPN)  
Secure Virtual Private Network access to your network.  
Supports multiple gateways for a single tunnel.
- Single Sign-On Mobility Agent support with FortiAuthenticator/FSSO Collector Agent
- Support automatic executing of a custom batch script via an IPsec VPN tunnel
- Support multiple (maximum 10) gateway IP/FQDN in a single IPsec VPN configuration
- Support XML configuration
- VPN from system tray
- VPN auto connect/always up  
Support ability to automatically connect to a VPN tunnel without user interaction  
Support ability to configure the VPN to always be connected
- Vulnerability Scan  
Identify system and application vulnerabilities.

# Provisioning FortiClient

FortiClient can be installed on a standalone computer using the installation wizard or deployed to multiple Microsoft Windows systems using Microsoft Active Directory (AD) or the Microsoft System Center 2012 Configuration Manager (SCCM).

This chapter contains the following sections:

- Standard FortiClient installation
- Installing FortiClient on an infected system
- Deploy FortiClient using Microsoft Active Directory (AD) server
- Deploy FortiClient using Microsoft SCCM 2012

For information on customizing your FortiClient installation, see “Custom FortiClient Installations” on page 113.

## Standard FortiClient installation

The following section describes installing FortiClient to a standalone Microsoft Windows and Apple Mac computer.

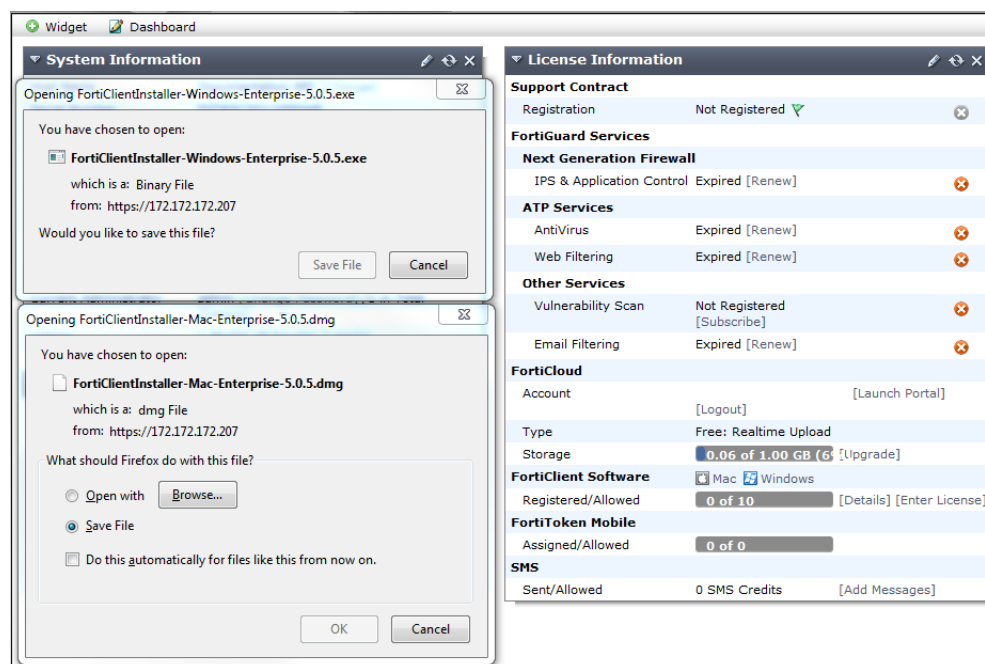
### Download the FortiClient installation files

The FortiClient installation files can be downloaded from the following sites:

- Fortinet Customer Service & Support: <https://support.fortinet.com>  
Requires a support account with a valid support contract. Download either the Microsoft Windows (32-bit/64-bit) or the Mac OS X installation file. The online installer file is located in the OnlineInstaller file folder in the FortiClientTools\_5.0.5.0308 file folder.
- FortiClient homepage: [www.forticlient.com](http://www.forticlient.com)  
Download the FortiClient Installer file. The installer file performs a virus and malware scan of the target system prior to installing FortiClient.

In FortiOS v5.0 Patch Release 1 or later, you can download the FortiClient installation files in the FortiGate dashboard. Go to *System > Dashboard > Status*, in the *License Information* widget, select *Mac* or *Windows* to download the FortiClient Online Installer file.

**Figure 1:** FortiGate license information widget



## Install FortiClient on a Microsoft Windows computer

The following instructions will guide you through the installation of FortiClient on a Microsoft Windows computer. For more information, see the [FortiClient \(Windows\) v5.0 Patch Release 5 Release Notes](#).

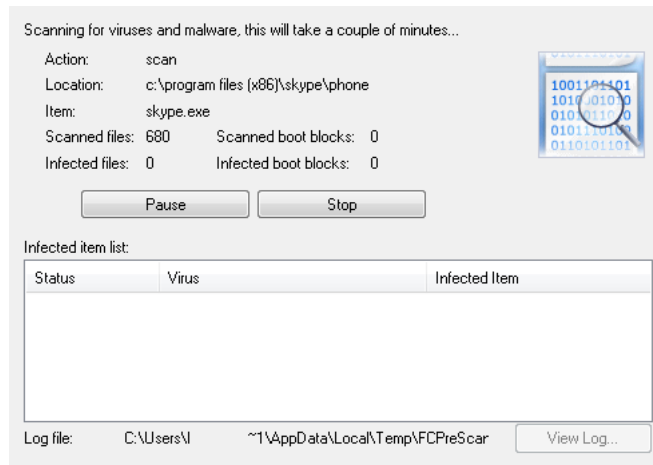
When installing FortiClient v5.0 Patch Release 5 or later, it is recommended to use the FortiClientInstaller file located in the OnlineInstaller file folder in the FortiClientTools\_5.0.5.0308 file folder. This file will launch the FortiClient Virus Cleaner which will scan the target system prior to installing the FortiClient application.

### To install FortiClient (Windows):

1. Double-click the FortiClient executable file to launch the setup wizard. The *Setup Wizard* will launch on your computer. When using the FortiClient OnlineInstaller file, the FortiClient Virus Cleaner will run before launching the *Setup Wizard*. If a virus is found that prevents the infected system from downloading the new FortiClient package, see [“Installing FortiClient on an infected system”](#) on page 24.



**Figure 2:** FortiClient virus cleaner



The *Welcome* screen appears.

**Figure 3:** Welcome screen



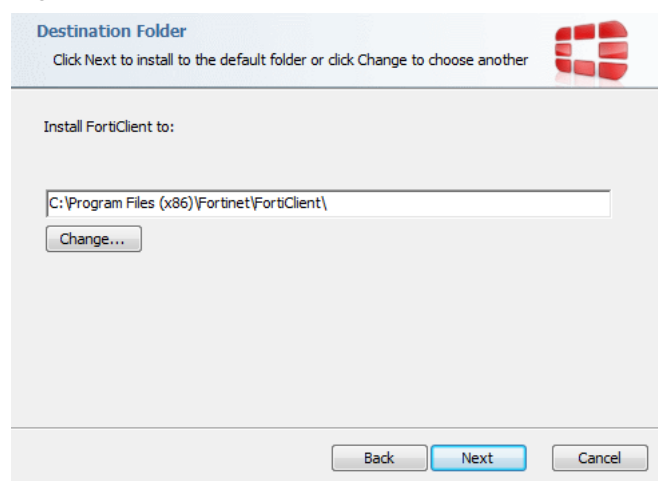
2. Read the license agreement and select *Next* to continue. You have the option to print the EULA in this window.

**Figure 4:** End-User License Agreement screen



3. Select *Change* to choose an alternate folder destination for installation. Select *Next* to continue.

**Figure 5:** Destination folder selection screen

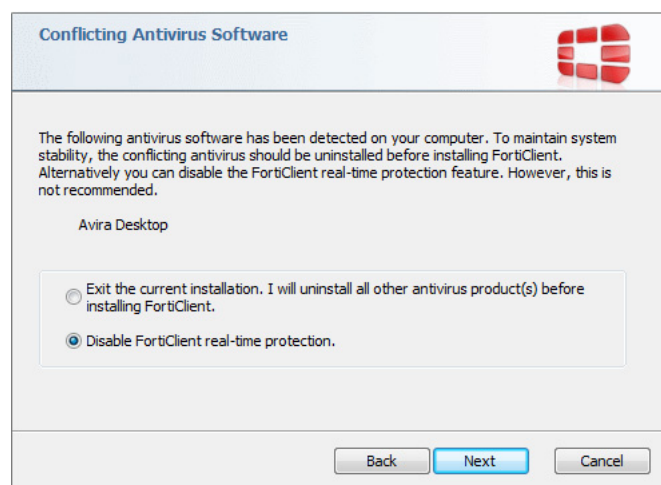


4. FortiClient will search the target system for other installed antivirus software. If found, FortiClient will display the *Conflicting Antivirus Software* page. You can either exit the current installation and uninstall the antivirus software, disable the antivirus feature of the conflicting software, or continue with the installation with FortiClient real-time protection disabled.



This dialog box is displayed during a new installation of FortiClient and when upgrading from an older version of FortiClient which does not have the antivirus feature installed.

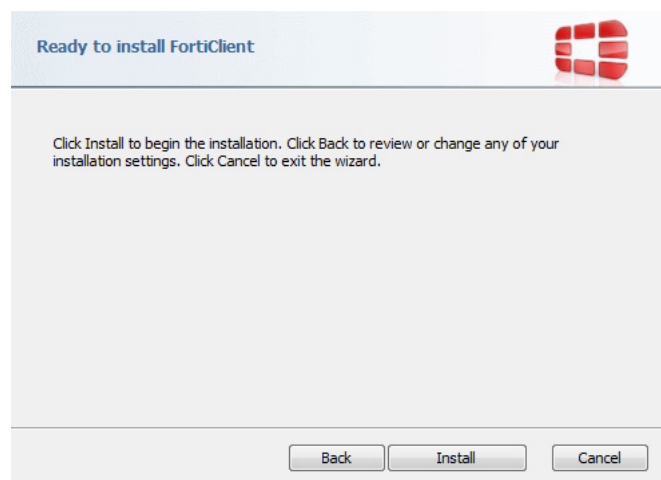
**Figure 6:** Conflicting antivirus software



It is recommended to uninstall the conflicting antivirus software before installing FortiClient or enabling the antivirus real-time protection feature. Alternatively, you can disable the antivirus feature of the conflicting software.

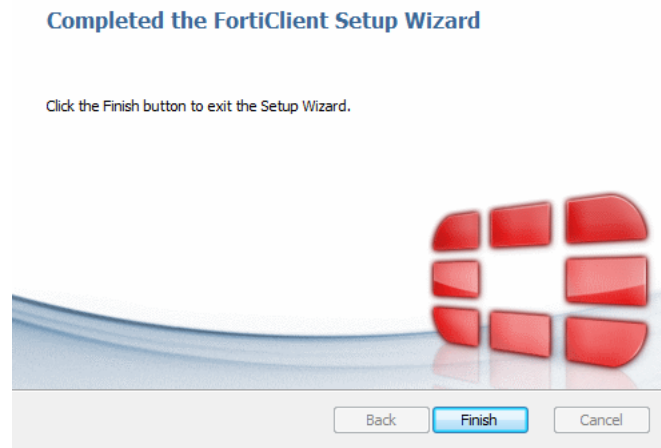
5. Select **Next** to continue.
6. Select **Install** to begin the installation.

**Figure 7:** Ready to install FortiClient screen



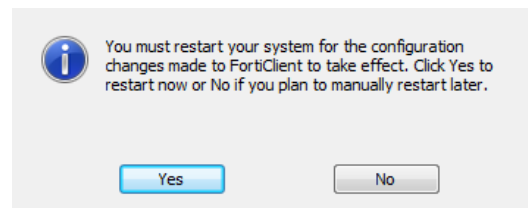
7. Select *Finish* to exit the FortiClient Setup Wizard.

**Figure 8:** Installation completed screen



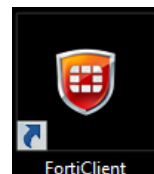
8. On a new FortiClient installation, you do not need to reboot your system. When upgrading the FortiClient version, you must restart your system for the configuration changes made to FortiClient to take effect. Select *Yes* to restart your system now, or select *No* to manually restart later.

**Figure 9:** System restart confirmation dialog box



9. To launch FortiClient, double-click the desktop shortcut icon.

**Figure 10:**FortiClient desktop shortcut



## Install FortiClient on a Mac OS X computer

The following instructions will guide you through the installation of FortiClient on a Mac OS X computer. For more information, see the [FortiClient \(Mac OS X\) v5.0 Patch Release 5 Release Notes](#).

### To install FortiClient (Mac OS X):

1. Double-click the FortiClient .dmg installer file to launch the FortiClient installer. The *FortiClient Installer* will install FortiClient on your computer. Select *Continue*.

**Figure 11:** Welcome screen



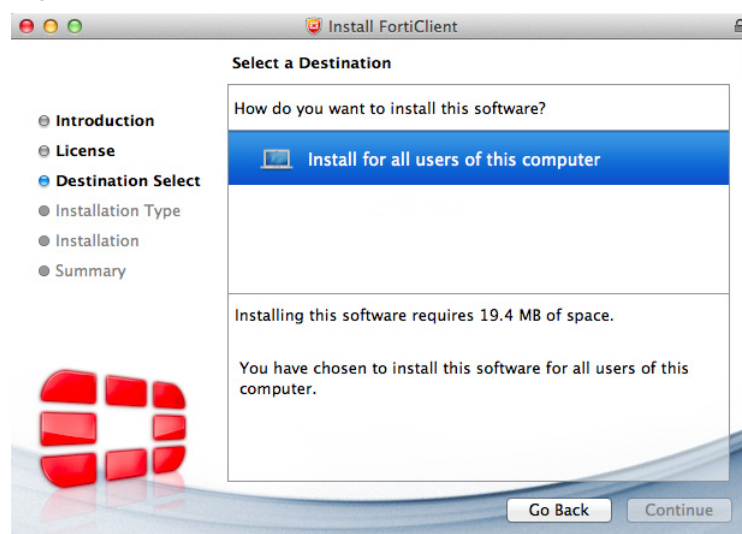
2. Read the Software License Agreement and select *Continue*. You have the option to print or save the Software Agreement in this window. You will be prompted to *Agree* with the terms of the license agreement.

**Figure 12:** Software License Agreement screen



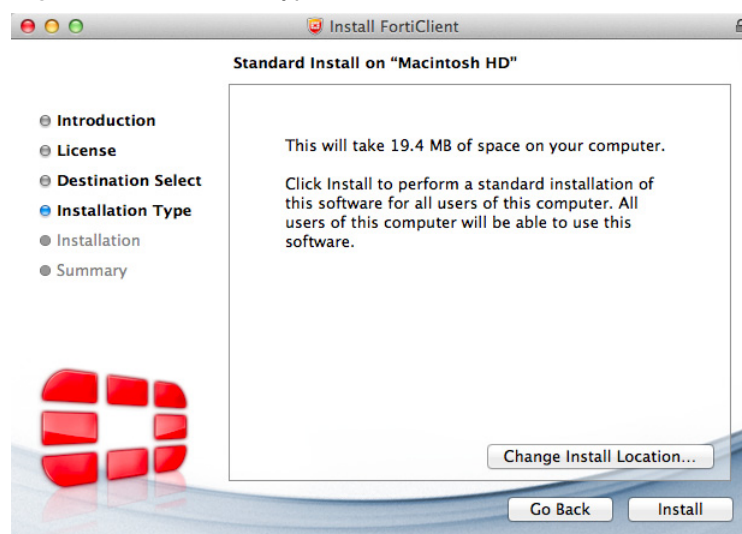
3. Select the destination folder for the installation.

**Figure 13:**Destination select screen



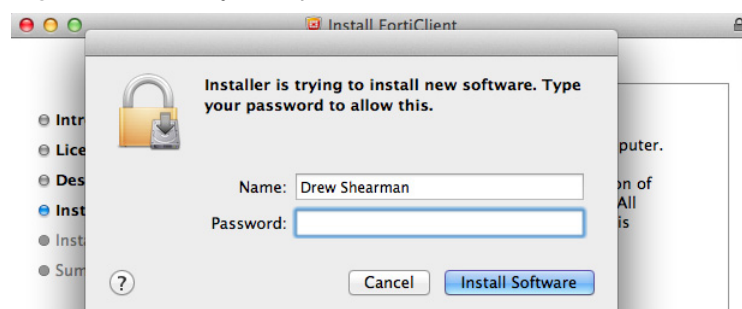
4. Select *Install* to perform a standard installation on this computer. You can change the install location from this screen.

**Figure 14:**Installation type screen



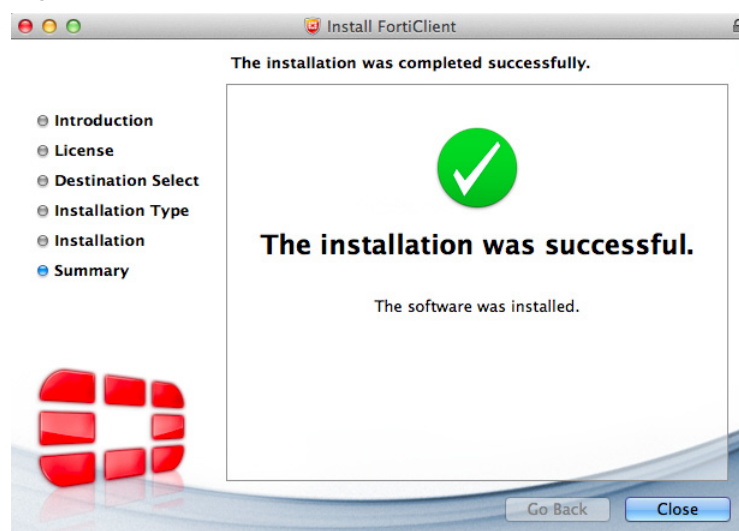
5. Depending on your system, you may be prompted to enter your system password.

**Figure 15:**Enter system password to continue



6. The installation was successful. Select *Close* to exit the installer.

**Figure 16:**The installation was successful



7. FortiClient has been saved to the *Applications* folder.

**Figure 17:**Applications folder



8. Double-click the FortiClient icon to launch the application. The application console loads to your desktop. Select the lock icon in the FortiClient console to make changes to the FortiClient configuration.

## Installing FortiClient on an infected system

The FortiClient installer always runs a quick antivirus scan on the target host system before proceeding with the complete installation. If the system is clean, installation proceeds as usual.

Any virus found during this step is quarantined before installation continues.

In case a virus on an infected system prevents downloading of the new FortiClient package, use the following process:

- Boot into “safe mode with networking” (which is required for the FortiClient installer to download the latest signature packages from the Fortinet Distribution Network).
- Run the FortiClient installer.

If a virus is found, it will be quarantined.

If no virus is found (but a previous installation was stopped in normal mode by a virus), you can run full antivirus scan as follows:

- Open an administrator command line window
- Change directory to the FortiClient pre-scan directory

By default, this is located at:

```
\Users\<currentuser>\AppData\Local\Temp\FCPreScan
```

Run the command:

```
av_task -f -x -o 18
```

This scans the entire file system. A log file is generated in the logs subdirectory. When complete, reboot back into normal mode and run the FortiClient installer to proceed.



Microsoft Windows will not allow FortiClient installation to complete in safe mode. An error message will be generated. It is necessary to reboot back into normal mode to complete the installation.

---

## Deploy FortiClient using Microsoft Active Directory (AD) server

There are multiple ways to deploy FortiClient to endpoint devices including using Microsoft Active Directory.

---



The following instructions are based from Microsoft Windows Server 2008. If you are using a different version of Microsoft Server, your MMC or snap-in locations may be different.

---

### Using Microsoft AD to deploy FortiClient:

1. On your domain controller, create a distribution point.
2. Log on to the server computer as an administrator.
3. Create a shared network folder where the FortiClient MSI installer file will be distributed from.
4. Set file permissions on the share to allow access to the distribution package. Copy the FortiClient MSI installer package into this share folder.
5. Select *Start > Administrative Tools > Active Directory Users and Computers*.



6. After selecting your domain, right-click to select a new Organizational Unit (OU).
7. Move all the computers you wish to distribute the FortiClient software to into the newly-created OU.
8. Select *Start > Administrative Tools > Group Policy Management*. The Group Policy Management MMC Snap-in will open. Select the OU you just created. Right-click it, *Select Create a GPO in this domain*, and Link it here. Give the new GPO a name then select *OK*.
9. Expand the Group Policy Object container and find the GPO you just created. Right-click the GPO and select *Edit*. The Group Policy Management Editor MMC Snap-in will open.
10. Expand *Computer Configuration > Policies > Software Settings*. Right-click *Software Settings* and select *New > Package*.
11. Select the path of your distribution point and FortiClient installer file and then select *Open*. Select *Assigned* and select *OK*. The package will then be generated.
12. If you wish to expedite the installation process, on both the server and client computers, force a GPO update.
13. The software will be installed on the client computer's next reboot. You can also wait for the client computer to poll the domain controller for GPO changes and install the software then.

#### **Uninstall FortiClient using Microsoft Active Directory server:**

1. On your domain controller, select *Start > Administrative Tools > Group Policy Management*. The Group Policy Management MMC Snap-in will open. Expand the Group Policy Objects container and right-click the Group Policy Object you created to install FortiClient and select *Edit*. The Group Policy Management Editor will open.
2. Select *Computer Configuration > Policy > Software Settings > Software Installation*. You will now be able to see the package that was used to install FortiClient.
3. Right-click the package, select *All Tasks > Remove*. Choose *Immediately uninstall the software from users and computers*, or *Allow users to continue to use the software but prevent new installations*. Select *OK*. The package will delete.
4. If you wish to expedite the uninstallation process, on both the server and client computers, force a GPO update as shown in the previous section. The software will be uninstalled on the client computer's next reboot. You can also wait for the client computer to poll the domain controller for GPO changes and uninstall the software then.

## **Deploy FortiClient using Microsoft SCCM 2012**

The Microsoft System Center 2012 Configuration Manager (SCCM) may be used to deploy and manage multiple FortiClient Installations. This section presents various scenarios that you can utilize.

A fully functional SCCM server, along with discovered devices, is required. Visit the Microsoft web site for supporting documentation.



These instructions assume you have already installed and configured SCCM. If you have not, please refer to Microsoft's online help sources for information on this task.

---

The Microsoft *System Center 2012 Configuration Manager* (SCCM) may be used to deploy and manage multiple FortiClient Installations. This chapter presents various scenarios that you can utilize.

A fully functional SCCM server, along with discovered devices, is required. Visit the Microsoft web site for supporting documentation.

The following topics are detailed in this section:

- [SCCM setup](#)
- [Task sequences](#)
- [Task sequence examples for FortiClient.](#)

## SCCM setup

Microsoft maintains a public free virtual lab of the *System Center 2012 Configuration Manager* (SCCM) at <http://technet.microsoft.com/virtuallabs/bb539977>.

At this page you can access a completely installed and properly configured system that can be used for testing various SCCM deployment scenarios. For ongoing enterprise use, a new system has to be created and configured.

SCCM product home page: <http://www.microsoft.com/server-cloud/system-center>

Technet documentation: <http://technet.microsoft.com/systemcenter>

Microsoft documentation: <http://www.microsoft.com/en-ca/download/details.aspx?id=29901>

The following subsections discuss some of the preparations required to enable control of FortiClient host computers.

### Client discovery options and configuration

The *Configuration Manager* uses various methods to discover the Windows devices that an administrator can control on the network. One such method is the use of a common domain. To use this method, the Windows server hosting the *Configuration Manager* should be configured as domain controller. All Windows devices that will be managed should then join the domain. The *Configuration Manager* automatically discovers all Windows devices that join.

### Client installation

The *Configuration Manager* console may be used to install configuration manager client software on target Windows devices that have joined the controlled domain. This is required for pushing the configuration to the devices.

### Client policy polling interval settings

The configuration manager client on each Windows device polls for policy changes on the server at a regular interval. The polling interval defaults to 60 minutes. Each newly pushed or deployed task will run on all selected clients within this polling interval. You can customize the polling interval as required.

### Client collections

New configurations are usually deployed to collections of devices. All of the devices that have joined the controlled domain will be added to a default collection.

You may want to deploy a different set of configurations to different groups of devices based on your user base. This can be accomplished by creating different client collections. Devices that have joined the domain will be added to one or more of those collections. Configurations may then be selectively deployed.

### Client security issues

The *Configuration Manager* is able to deploy a large variety of applications to all the devices that joined the domain. Most of these tasks run with the administrator or system user authorisation

level on the client devices. It is important to keep the *Configuration Manager* host under the highest level of security control possible.

It is also important to always test new planned application deployments in a controlled lab environment, or on a small client collection, before deploying to the entire client base.

### Network share for all clients

The *Configuration Manager* console is used to deploy applications to client devices. Some of the applications require specification of files by file path and name. The client devices must have access to the files when the applications run. For instance, to upload a FortiClient XML configuration file to a given client collection, all client devices in the collection must independently have local access to the new XML configuration file.

The files may be provided by any suitable method. Examples include use of an HTTP or FTP server. The examples in this document use a network share. This should be available to all devices on the given client collection.

## Task sequences

The *Configuration Manager* provides task sequences as a means of deploying commands to discovered clients without requiring user intervention. The FortiClient configuration examples in this chapter use the *Run Command Line* task sequences to run various command-line commands on client devices.

Task sequences are described in the following Microsoft documents:

Planning a Task Sequence Strategy

<http://technet.microsoft.com/en-us/library/gg712685.aspx>

How to Manage Task Sequences

<http://technet.microsoft.com/en-us/library/hh273490.aspx>

Here is a simple example of how task sequences may be used to control client devices.

In this example, a simple set of command-line commands are created in the *Configuration Manager* console. Once deployed, the commands will print information requested to the log file for each client.

The following commands will be executed on each client:

```
cd
dir c:\users
whoami
```

The first command will print the current working directory. This is likely to be `c:\windows\system32`. The second command will print the contents of the specified directory. The third command will print the name of the current user (the user under which the task sequence is running).

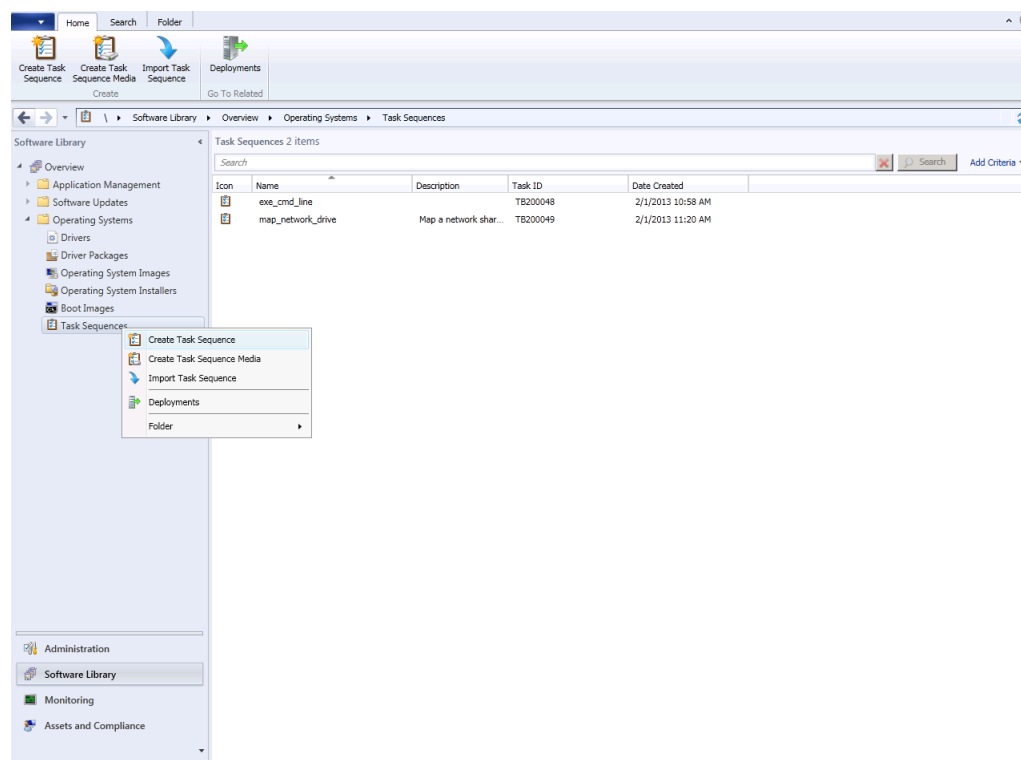
The output of the commands can be found in the log file on each client device at:

```
C:\Windows\CCM\Logs\smsts.log
```

## To create a new task sequence:

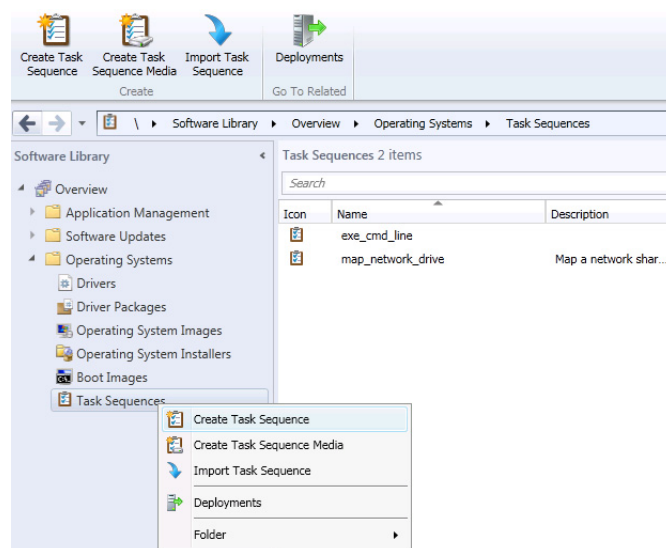
1. Launch the *Configuration Manager* console.  
The *Configuration Manager* console appears.

**Figure 18:**SCCM configuration manager



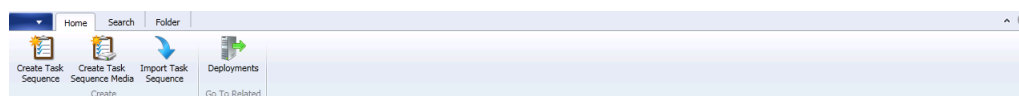
2. Select *Software Library* > *Overview* > *Operating Systems* > *Task Sequences*.
3. Right-click the *Task Sequence* menu item and select *Create Task Sequence*.

**Figure 19:**Right-click menu



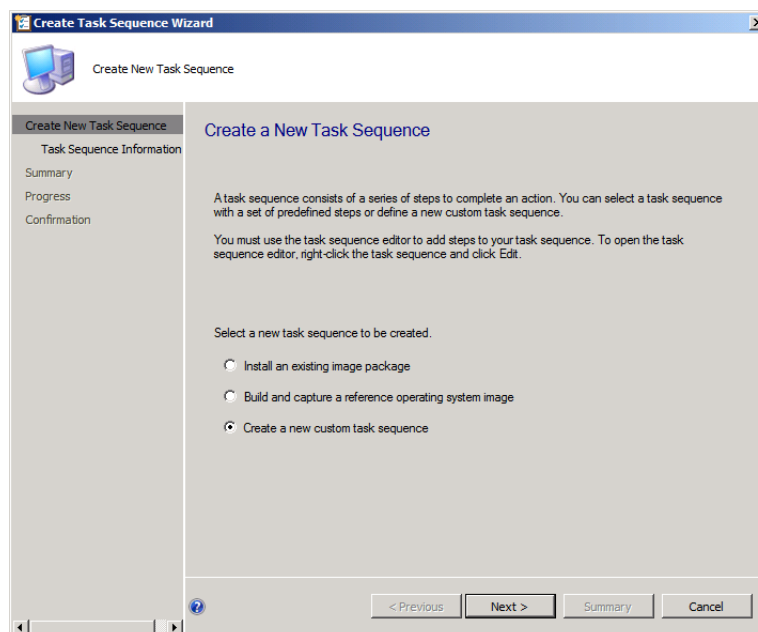
Alternatively, you can select *Create Task Sequence* in the toolbar.

**Figure 20:**Toolbar menu items



The *Create Task Sequence Wizard* opens.

**Figure 21:**Create task sequence task wizard



4. Select the *Create a new custom task sequence* radio button. Then select *Next* to proceed.
5. Enter a name for the task sequence.
6. Enter a comment to describe the task sequence.
7. Select *Next* to proceed.

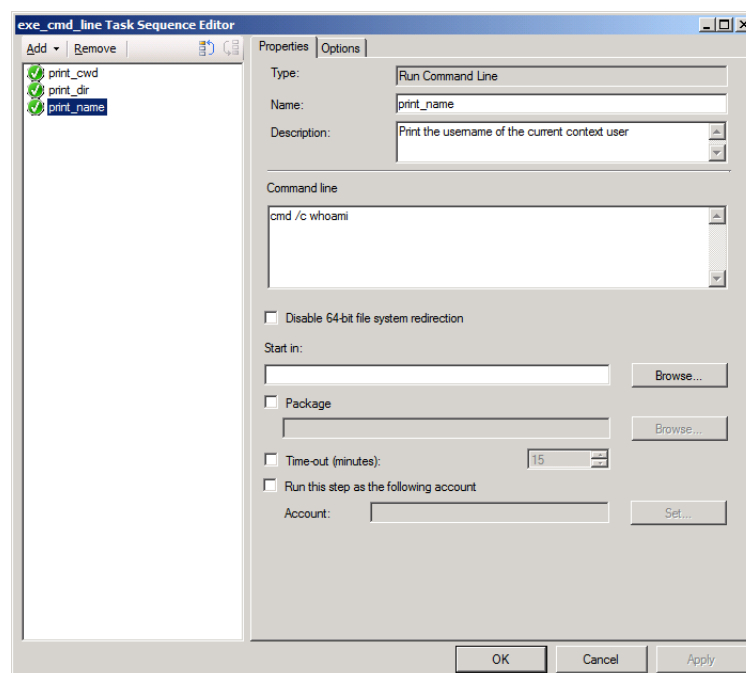
A summary of the task sequence configuration is displayed.

8. Select *Close* to save the configuration. The new task sequence is created and displayed in the *Configuration Manager* console.
9. Select *Task Sequences* in the menu in the left pane of the *Configuration Manager* console. The new task sequence is displayed in the right pane.

**To add individual tasks into the task sequence:**

1. Right-click in the newly created task sequence.
2. From the shortcut menu list, select *Edit*. The *Task Sequence Editor* dialog box is displayed. Alternatively, select the *Task Sequence* and select the *Edit* icon in the toolbar.
3. Select the *Add* drop-down button.
4. From the drop-down list, select *General* and the select *Run Command Line*.  
A new tab is displayed in the right pane of the dialog box.

**Figure 22:**Command line window



5. Configure the following settings:

<b>Name</b>	Enter a name for the command.
<b>Description</b>	Enter a description for the command.
<b>Command line</b>	<p>Enter the command line in the text field.</p> <p>The command will usually start with “cmd /c”. For instance, the first command in this example is entered as:</p> <pre>cmd /c cd cmd /c dir c:\users cmd /c whoami</pre>

6. Select *Apply* to apply the configuration.
7. Select *OK* to continue.

The task sequence will be saved with the three command-line tasks. To view or modify the tasks, select *Edit* in the short-cut menu for the selected task sequence.



There are three commands in this example. Each of the commands may be created as a single task. There will be a total of three tasks in the left pane of the dialog box. Each of the tasks will have one of the command-line commands:

```
cmd /c cd
cmd /c dir c:\users
cmd /c whoami
```

This format is preferred as it isolates any client errors to a specific task.

The three commands may also be combined into a lengthy single command:

```
cmd /c cd ; dir c:\users ; whoami
```

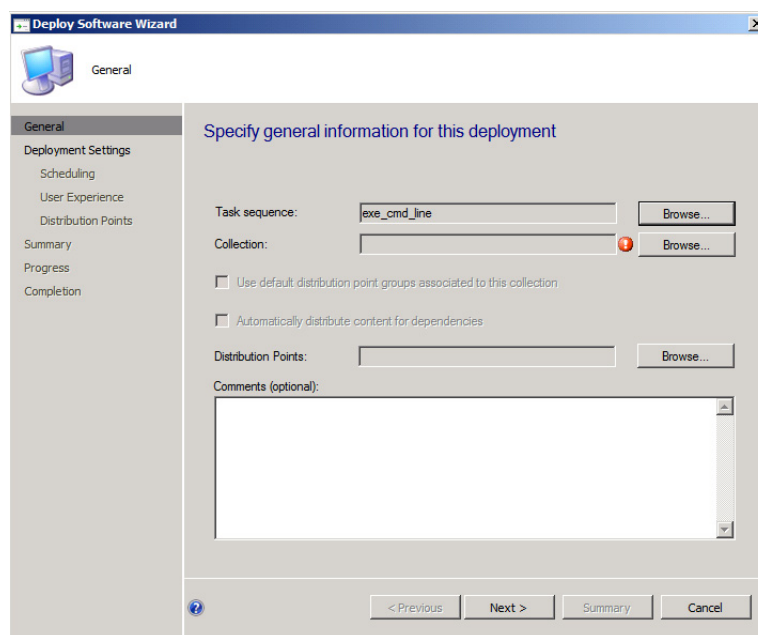
This format may mask task sequence errors. It is not recommended.

There is also an option to use a batch script.

### Deploy the task sequence:

1. Right-click the task sequence.
2. Select *Deploy* in the right-click menu list.  
The *Deploy Software Wizard* dialog box appears.

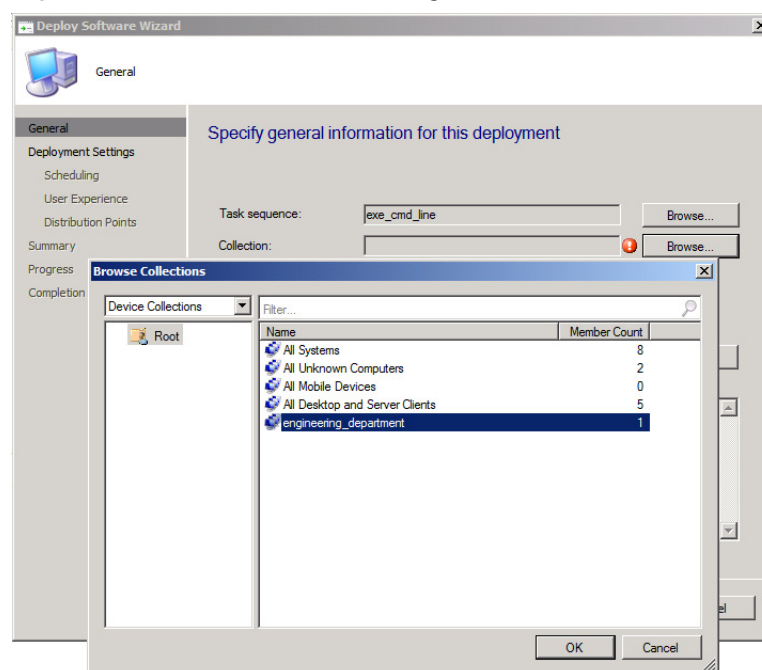
**Figure 23:**Deploy software wizard dialog box



Alternatively, select the *Task Sequence* and select the *Deploy* icon in the toolbar.

3. Select *Browse*.  
A *Browse Collections* dialog box appears listing all currently configured client collections.

**Figure 24:**Browse collections dialog box



4. Select the client collection to which this task sequence should be deployed
5. Select *OK* to close the *Browse Collections* dialog box. Pressing CTRL returns you to the *General* tab of the *Deploy Software Wizard* dialog box.
6. Select *Next*. The *Deployment Settings* tab is displayed
7. In the *Purpose* drop-down menu select *Required*. This makes the task mandatory for all clients receiving it.
8. Select the *Send wake-up packets* checkbox to enable this feature.
9. Select *Next*. The *Scheduling* tab is displayed
10. Select *New*. In the *Assignment Schedule* dialog box select the *Assign immediately after this event* radio button.
11. Select *OK*. This closes the *Assignment Schedule* dialog box. The *Scheduling* tab is displayed.
12. Select *Next*. The *User Experience* tab is displayed.
13. Select the *Show Task Sequence progress* checkbox to enable this feature.

This configuration is optional. It displays a progress dialog box on each client as the task executes. If a silent background execution of tasks is desired, leave this checkbox unchecked.
14. Select *Next*. The *Distribution Points* tab is displayed. For this example, there is nothing to change in this tab.
15. Select *Next*. The *Summary* tab is displayed.
16. Select *Next*. The *Completion* tab is displayed which shows a summary of all selections.
17. Select *Close* to close the *Deploy Software Wizard*.

This completes the deployment of the task sequence to the selected client collections. Client devices in the collection should start to receive and execute the task. All clients will run the task within the *Policy Polling Interval* configured.

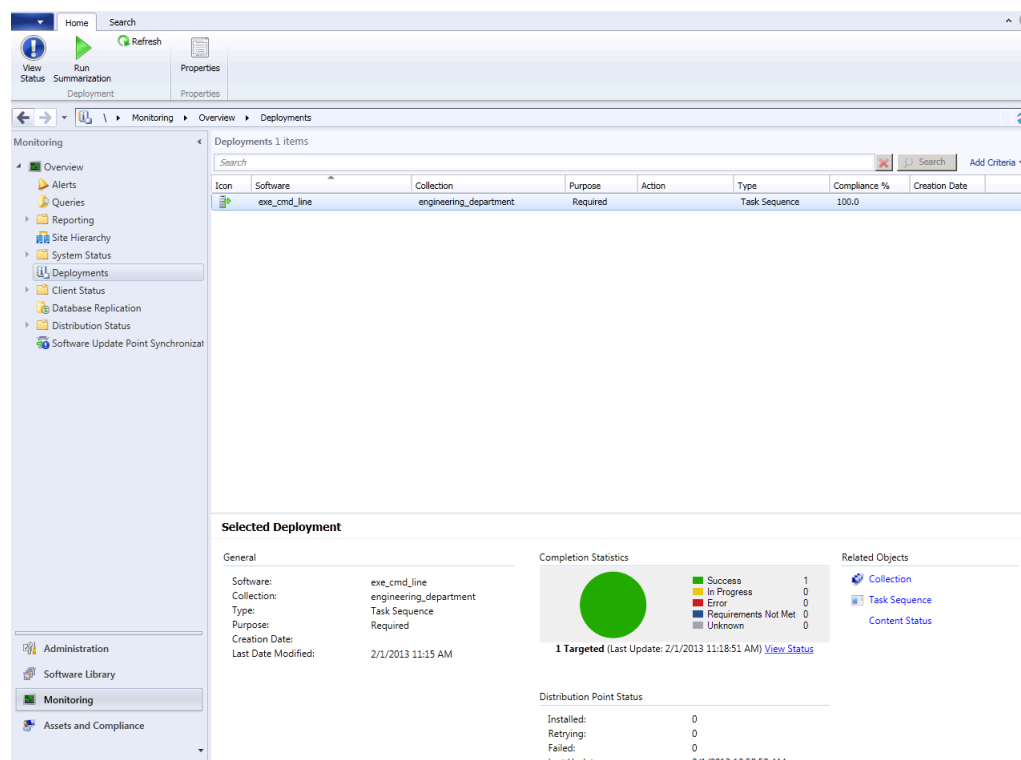


### Monitor a deployed task sequence:

1. Launch the *Configuration Manager* console.
2. Select *Monitoring* from the tree-menu.
3. Select the *Overview* menu item in the left pane to expand the menu.
4. Select the *Deployments* menu item. The list of deployments is displayed in the right pane.
5. Click to select the recently deployed task sequence in the right pane.

The *Deployments* window is displayed.

**Figure 25:**Deployment window



### To monitor a deployed task sequence on the client device, use the following process:

1. Launch the *Software Center* console on the client device. It displays a list of tasks deployed to it.



If a recently deployed task sequence is not displayed, most likely the *Policy Polling Interval* is yet to expire on this client.

2. Select the *Task Sequence*. The current status is displayed.

In addition to the two monitoring procedures above, the client log file is available on the client device at:

C:\Windows\CCM\Logs\smsts.log

It will contain details of the task sequence, including:

- the command-line commands executed
- any output generated by the commands
- any error messages

## Mapping a network drive

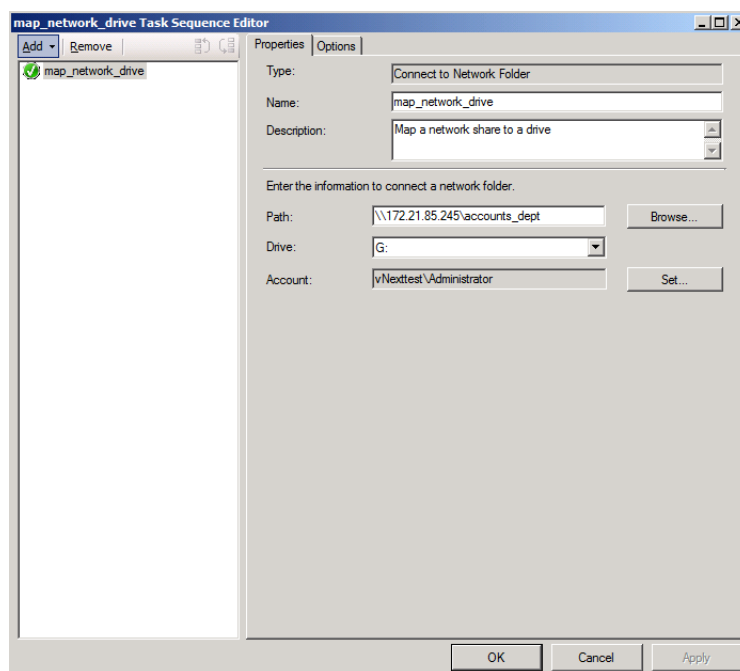
When a file is referenced in a task sequence, it must be made available to all clients before the task sequence starts. The processes listed below explain how to map a network folder to a drive in a given task sequence. If the mapping is successful, all the files in the shared folder will be available for the command-line commands in the task sequence.

### To map a network drive in the task sequence:

1. Create a new custom task sequence.
2. Edit the task sequence.

The *Task Sequence Editor* dialog box is displayed.

**Figure 26:**Task sequence editor dialog box



3. Select the *Add* drop-down button.
4. In the drop-down list, select *General > Connect to Network Folder*. A new tab is displayed in the right pane of the dialog box.
5. Type a name for the command.
6. Type a description for the command.
7. Type the full path to the network shared folder or use the *Browse* button to select it.



When using the *Browse* button, be sure that the network share is being reported with the same path as the client devices will use.

Here is an example of a valid path: \\172.21.85.245\accounts\_dept

8. Type a drive letter, along with a colon.

For example: G:

9. Select *Set* and provide a user name and password that is valid for the network shared folder selected.
10. Select *OK* to return to the *Task Sequence Editor* dialog box.
11. Select *Apply* to save the task.

More tasks may be added to the task sequence as described in earlier parts of this section. Tasks may be re-ordered using the other buttons provided in the top of the left pane in the *Task Sequence Editor* dialog box.

When all tasks have been added, select *OK* to close the dialog box.

## Task sequence examples for FortiClient

The task sequence processes described in the preceding section may be applied to any regular Windows tasks that runs on the command line. This section discusses several example FortiClient configurations that could be completed from the Windows command-line.

The examples in this section list only the command-line commands to be used. When deploying these from the *Configuration Manager* console, remember to always use the processes discussed this chapter to create the task sequence. The procedure is the same, only the contents of the *Run Command Line* commands will differ.

### Install FortiClient

FortiClient can be installed from the command line using `msiexec`. In this example, a FortiClient MSI file that is provided on a network shared folder is used to install FortiClient to devices in the client collection.

Use the following commands in a task sequence to install FortiClient on a Windows client device.

1. Connect to a network folder:
  - Name: `map_network_drive`
  - Description: Mount a network shared directory that contains the FortiClient image to install
  - Path: \\172.21.85.245\accounts\_dept
  - Drive: G:
  - Account: vNexttest\administrator
2. Run command line:
  - Name: `copy_fct_image`
  - Description: Copy FortiClient MSI image from network shared directory
  - Command line: `cmd /c copy /y G:\FortiClient.msi c:\temp\FortiClient.msi`
3. Run command line:
  - Name: `install_fct`
  - Description: Install FortiClient using MSI image
  - Command line: `cmd /c msiexec /i c:\temp\FortiClient.msi /qn`

Ensure that the FortiClient.msi file is available in the network share, and that the network share is accessible to all client devices in the client collection before deploying this task sequence.

## Export the FortiClient XML configuration file

FortiClient features may be controlled using an XML configuration file. The configuration file is first exported from FortiClient, modified with a text editor, and re-imported into FortiClient. The XML configuration syntax and usage is documented in the [FortiClient v5.0 Patch Release 5 XML Reference](#).

Use the following commands in a task sequence to export the XML configuration file from a Windows client device which has FortiClient installed.

1. Connect to a network folder:
  - Name: map\_network\_share
  - Description: Mount a network shared directory to which configuration file will be copied.
  - Path: \\172.21.85.245\engineering\_dept
  - Drive: M:
  - Account: vNexttest\administrator
2. Run command line:
  - Name: export\_fct\_xml
  - Description: Export the FortiClient XML configuration file
  - Command line: `cmd /c C:\Program Files\Fortinet\FortiClient\fcconfig -o export -f c:\temp\fct_xml.conf`
3. Run command line:
  - Name: copy\_fct\_xml
  - Description: Copy FortiClient XML file to network shared directory
  - Command line: `cmd /c copy /y c:\temp\fct_xml.conf M:\`

This copies fct\_xml.conf to the mounted share. If there is more than one device in the client collection, they will each overwrite the same file. You may use a batch script to uniquely rename the file as it is copied.



The full path to the FortiClient installation directory is used as a prefix to FCConfig.exe. The value provided in this example is the default on a 32-bit system. The default on 64-bit systems is:

```
C:\Program Files (x86)\Fortinet\FortiClient
```

If the client collection has a mixture of both 32-bit and 64-bit devices, a batch script may be used to selectively run from the correct platform-dependent directory.

## Import a modified XML configuration file

Use the following commands in a task sequence to import an XML configuration file into FortiClient in a Windows client device.

1. Connect to a network folder:
  - Name: map\_network\_share
  - Description: Mount a network shared directory that contains the XML configuration file
  - Path: \\172.21.85.245\engineering\_dept
  - Drive: M:
  - Account: vNexttest\administrator

**2. Run command line:**

Name: copy\_fct\_xml

Description: Copy FortiClient XML configuration file from network shared directory

Command line: cmd / c copy /y M:\fct\_xml.conf c:\temp\

**3. Run command line:**

Name: import\_fct\_xml

Description: Import the FortiClient XML configuration file

Command line: cmd /c "C:\Program Files\Fortinet\FortiClient\fcconfig -o import -f c:\temp\fct\_xml.conf"

The same configuration file is used by all devices in the client collection.

## Upgrade FortiClient

The FortiClient upgrade process is similar to the regular installation. The only difference is the use of a different version of FortiClient during the installation. A reboot is required, but the task sequence should handle this properly.

The same procedure listed earlier for FortiClient installation could be reused.

## Uninstall FortiClient

Use the following command in a task sequence to uninstall FortiClient from Windows client devices.

**1. Run command line:**

- Name: uninstall\_fct
- Description: Uninstall FortiClient
- Command line: wmic product where name="FortiClient" call uninstall /nointeractive

The task sequence should process the required reboot correctly.

# Endpoint Management

## Introduction

The purpose of this section is to provide basic instructions on how to configure, deploy, and manage FortiClient configurations from your FortiGate device.



Endpoint Management requires FortiClient v5.0.0 or later and a FortiGate device running FortiOS v5.0.0 or later, or a FortiCarrier device running FortiOS Carrier v5.0.0 or later. Certain features are only available on v5.0 Patch Release 2 or later.



Endpoint Management is available on FG-30D model series and higher.

## Configure endpoint management

In FortiOS v5.0, configuration and management of FortiClient endpoint agents are handled by FortiGate. You can configure your FortiGate device to discover new devices on your network, enforce FortiClient registration, and deploy a pre-configured endpoint profile to connected devices. The endpoint profile can be deployed to devices on your network and over a VPN connection. You can configure multiple endpoint profiles. The endpoint profile consists of the following sections:

- Antivirus Realtime Protection on Client
- Application Firewall

You can select the application control sensor to associate with the endpoint profile.
- Web Category Filtering

You can select the web filtering profile to associate with the endpoint profile. You can also select to disable Web Category Filtering when the client is protected by the FortiGate.
- Endpoint Vulnerability on Client

You can select to scan daily, weekly or monthly. You can also select to scan the client after registration with your FortiGate device.
- Client VPN Provisioning

You can specify the VPN name, type, gateway and other settings the client will use to connect to your FortiGate device via the VPN connection. Two-factor authentication is configured in the FortiGate VPN configuration.
- Upload logs to FortiAnalyzer/FortiManager

You can select to use the same IP address as the FortiGate device or specify a different device IP address. You can specify the frequency of the log upload.

- Use FortiManager for client software/signature update  
Select to enable this feature and enter the IP address of your FortiManager device. You can select to failover over to the FortiGuard Distribution Network (FDN) when the FortiManager is not available.
- Advanced options  
You can customize which modules are displayed in the FortiClient dashboard. This will allow you to activate any of the modules at a later date without needing to re-install FortiClient. Select to show/hide FortiClient modules in the client console. You can also select to hide banners.  
Select if profile details may be displayed before endpoint control registration is completed.

See the [FortiOS Handbook 5.0](#) for more information on configuring your FortiGate device.

### Configure Endpoint Management on the FortiGate device:

1. Enable device management and broadcast discovery messages.

To configure *Device Management*, go to *System > Network > Interface*, select the applicable interface, and select *Edit* in the toolbar. In the *Edit Interface* page you can select to enable *Detect and Identify Devices*. To enable *Broadcast Discovery Messages* (optional) you must first enable *FCT-Access* under *Administrative Access*. Select *OK* to save the setting.



Broadcast Discovery Messages is an optional configuration. When enabled, the FortiGate will broadcast messages to your network, allowing client connections to discover the FortiGate for FortiClient registration. Without this feature enabled, the user will enter the IP address or URL of the FortiGate to complete registration.

**Figure 27:**Edit interface window

**Edit Interface**

Name: internal(00:09:0F:F5:C9:10)

Alias:

Link Status: Up

Type: Physical Interface

Administrative Access: ☒ HTTPS ☒ PING ☒ HTTP ☒ FMG-Access ☒ CAPWAP  
☒ SSH ☒ SNMP ☒ TELNET ☒ FCT-Access

IPv6 Administrative Access: ☐ HTTPS ☐ PING ☐ HTTP ☐ FMG-Access ☐ CAPWAP  
☐ SSH ☐ SNMP ☐ TELNET

Security Mode: Captive Portal

Customize Portal Messages: ☐

User Groups:

Device Management: ☒ Detect and Identify Devices  
☒ Add New Devices to Vulnerability Scan List  
☒ Broadcast Discovery Messages

Enable STP: ☒

Enable Explicit Web Proxy: ☐

Listen for RADIUS Accounting Messages: ☐

Comments:  0/255

Administrative Status: Up Down

## Configure the client endpoint profile:

1. To configure the *Client Endpoint Profile*, go to *User & Device > Device > Endpoint Profile*. You can edit the default profile for create a new endpoint profile.



The option to assign the profile to device groups, user groups, and users is only available when selecting to create a new endpoint profile.



In FortiOS v5.0 Patch Release 3 or later, you will need to enable *Multiple Security Profiles* in the *Feature Settings* to create a new endpoint profile.

**Figure 28:**Edit endpoint profile window

**Edit Endpoint Profile** default

Profile Name: default

Comments: Write a comment... 0/255

**FortiClient Configuration Deployment**

**Windows and Mac**

- ☒ AntiVirus Realtime Protection on Client
- ☒ Application Firewall: default
- ☒ Web Category Filtering: default
- ☐ Disable Web Category Filtering when protected by this FortiGate
- ☒ Endpoint Vulnerability Scan on Client
- Schedule Scan Type: ☐ Daily ☐ Weekly ☒ Monthly
- ☒ Initiate Scan After Client Registration
- ☐ Client VPN Provisioning
- ☐ Upload Logs to FortiAnalyzer/FortiManager
- ☐ Use FortiManager for client software/signature update
- ☒ Advanced Options
- Dashboard:
  - ☒ AntiVirus ☒ WebFilter ☒ Application Firewall
  - ☒ VPN ☒ Vulnerability Scan ☐ Banner
- Registration Dialog:
  - ☒ Profile Details

**iOS**

- ☐ Web Category Filtering: default
- ☐ Client VPN Provisioning
- ☐ Distribute Configuration Profile (.mobileconfig file)

**Android**

- ☐ Web Category Filtering: default
- ☐ Client VPN Provisioning

**Apply**



## 2. Configure the following settings:

<b>Toolbar Options</b>	Select the endpoint profile using the drop-down menu. Select the plus (+) icon to create a new endpoint profile. Select the clone icon to create a clone of an existing profile. Select the view list icon to view endpoint profiles and assignment.
<b>Profile Name</b>	When editing the default profile, the name cannot be changed. When creating a new endpoint profile, XSS vulnerability characters are not allowed.  Enter a name for the new endpoint profile.
<b>Comments</b>	Enter a profile description. (optional)
<b>Assign to Profile To:</b>	Device Groups: Select device groups in the drop-down menu. Use the plus (+) icon to assign multiple device groups to the endpoint profile, for example Mac and Windows PC.  User Groups: Select user groups in the drop-down menu. Select the plus (+) icon to assign multiple user groups to the endpoint profile.  Users: Select users in the drop-down menu. Select the plus (+) icon to assign multiple users to the endpoint profile.  <b>Note:</b> These options are only available when creating a new endpoint profile.

### ***FortiClient Configuration Deployment Windows and Mac***

<b>Antivirus Realtime Protection on Client</b>	Toggle the button on or off to enable or disable this feature.
<b>Application Firewall</b>	Toggle the button on or off to enable or disable this feature.  When enabled, you can select an application control sensor in the drop-down menu.
<b>Web Category Filtering</b>	Toggle the button on or off to enable or disable this feature.  When enabled, you can select a web filter profile in the drop-down menu.  Select the checkbox to disable web category filtering on the client when protected by the FortiGate.
<b>Endpoint Vulnerability Scan on Client</b>	Toggle the button on or off to enable or disable this feature.  When enabled, you can select the scheduled scan type to daily, weekly, or monthly.  Select the checkbox to initiate a scan after client registration with the FortiGate.

<b>Client VPN Provisioning</b>	<p>Toggle the button on or off to enable or disable this feature.</p> <p>When enabled, you can configure multiple IPsec VPN and SSL VPN connections.</p> <p>Select the plus (+) icon to add additional VPN connections.</p> <p>Enter the VPN name, type, remote gateway, and authentication method information.</p>
<b>Upload Logs to FortiAnalyzer/FortiManager</b>	<p>Toggle the button on or off to enable or disable this feature.</p> <p>When enabled, you can select to use the same FortiAnalyzer/FortiManager used by the FortiGate or select <i>Specify</i> to enter a different device IP.</p> <p>You can set the schedule to hourly or daily. The FortiClient upload logs to the FortiAnalyzer/FortiManager only when it is able to connect to the device on the specified IP address.</p>
<b>Use FortiManager for client software/signature update</b>	<p>Toggle the button on or off to enable or disable this feature.</p> <p>When enabled, you can specify the IP address of the FortiManager.</p> <p>Select the checkbox to failover to the FortiGuard Distribution Network when the FortiManager is not available.</p>
<b>Advanced Options</b>	<p>Toggle the button on or off to enable or disable these features.</p> <p>When enabled, you can select which FortiClient modules are visible in the FortiClient console window. Select the appropriate checkbox to show the module.</p> <p>You can also select to show profile details for the Registration dialog.</p>

3. Select *Apply* to save the endpoint profile setting.

#### **Configure firewall policies:**

1. To configure a firewall policy for *Endpoint Management*, go to *Policy > Policy > Policy* and select *Create New* in the toolbar. For *Policy Subtype*, select *Device Identity*.

**Figure 29:**New policy window

Policy Type: ☒ Firewall ☐ VPN

Policy Subtype: ☐ Address ☐ User Identity ☒ Device Identity

Incoming Interface: internal

Source Address: all

Outgoing Interface: wan1

**Configure Authentication Rules**

Destination Address	Device	Endpoint Compliance	Service	Schedule	Security	Traffic Shaping	Logging	Action
all	All	-	ALL	always	-	x	x	DENY

☐ Disclaimer

☐ Customize Authentication Messages

**Device Policy Options**

☐ Attempt to detect all Unknown device types before implicit deny

☒ Redirect all non-compliant/unregistered FortiClient compatible devices to a captive portal

☒ Windows PCs ☒ Mac OS X ☒ iPhone/iPad ☒ Android

☐ Prompt E-mail Collection Portal for all devices

Comments: Write a comment... 0/1023

OK Cancel

2. Configure authentication rules. Select *Create New* and add an *Accept* authentication rule for all compliant Windows-PC clients. This rule will allow Windows clients which have installed FortiClient and have been registered to this FortiGate to pass traffic.

**Figure 30:**Accept authentication rule for compliant Windows-PC clients.

Destination Address: all

Device: Windows PC

Compliant with Endpoint Profile: ☒

Schedule: always

Service: ALL

Action: ACCEPT

**Logging Options**

☐ No Log

☒ Log Security Events

☐ Log all Sessions

**Security Profiles**

OFF AntiVirus default

OFF Web Filter default

OFF Application Control default

OFF IPS default

OFF Email Filter default

OFF DLP Sensor default

OFF VoIP default

OK Cancel

3. Select *OK* to save the rule.
4. In *Device Policy Options*, select the checkbox to *Redirect all non-compliant/unregistered FortiClient compatible devices to a captive portal*. Select the checkbox for the following: Windows PCs, Mac OS X, iPhone/iPad, and Android. Users will be redirected (via a web browser) to a dedicated portal where they can download the client. Once registered to the FortiGate, the endpoint profile will be assigned.

**Figure 31:**Captive portal options

**New Policy**

Policy Type: ☒ Firewall ☐ VPN

Policy Subtype: ☐ Address ☐ User Identity ☒ Device Identity

Incoming Interface: internal

Source Address: all

Outgoing Interface: wan1

**Configure Authentication Rules**

Create New Edit Delete

Destination Address	Device	Endpoint Compliance	Service	Schedule	Security	Traffic Shaping	Logging	Action
all	All	-	ALL	always	-	✗	✗	DENY

☐ Disclaimer

☐ Customize Authentication Messages

**Device Policy Options**

☐ Attempt to detect all Unknown device types before implicit deny

☒ Redirect all non-compliant/unregistered FortiClient compatible devices to a captive portal

☒ Windows PCs ☒ Mac OS X ☒ iPhone/iPad ☒ Android

☐ Prompt E-mail Collection Portal for all devices

Comments: Write a comment... 0/1023

OK Cancel

5. (Optional) Add an *Accept* authentication rule to allow traffic from all other devices to pass traffic without enforcing FortiClient Compliance.

**Figure 32:**Accept authentication rule for all other devices

**New Authentication Rule**

Destination Address: all

Device: All

Compliant with Endpoint Profile: ☐

Schedule: always

Service: ALL

Action: ACCEPT

**Logging Options**

☐ No Log

☒ Log Security Events

☐ Log all Sessions

**Security Profiles**

OFF AntiVirus default

OFF Web Filter default

OFF Application Control default

OFF IPS default

OFF Email Filter default

OFF DLP Sensor default

OFF VoIP default

OK Cancel

Once these two authentication rules are configured, select *OK* to save the new policy setting. Your client configuration is ready for deployment.

**Figure 33:**New policy with authentication rules and captive portal option

**New Policy**

Policy Type: ☒ Firewall ☐ VPN

Policy Subtype: ☐ Address ☐ User Identity ☒ Device Identity

Incoming Interface:  +

Source Address:  +

Outgoing Interface:  +

**Configure Authentication Rules**

+ Create New Edit Delete

Destination Address	Device	Endpoint Compliance	Service	Schedule	Security	Traffic Shaping	Logging	Action
all	Windows PC	✓	ALL	always	-	✗	🔒	✓ ACCEPT
all	All	✗	ALL	always	-	✗	🔒	✓ ACCEPT
all	All	-	ALL	always	-	✗	✗	✗ DENY

☐ Disclaimer

☐ Customize Authentication Messages

**Device Policy Options**

☐ Attempt to detect all Unknown device types before implicit deny

☒ Redirect all non-compliant/unregistered FortiClient compatible devices to a captive portal

☒ Windows PCs ☒ Mac OS X ☒ iPhone/iPad ☒ Android

☐ Prompt E-mail Collection Portal for all devices

Comments:  0/1023

OK Cancel

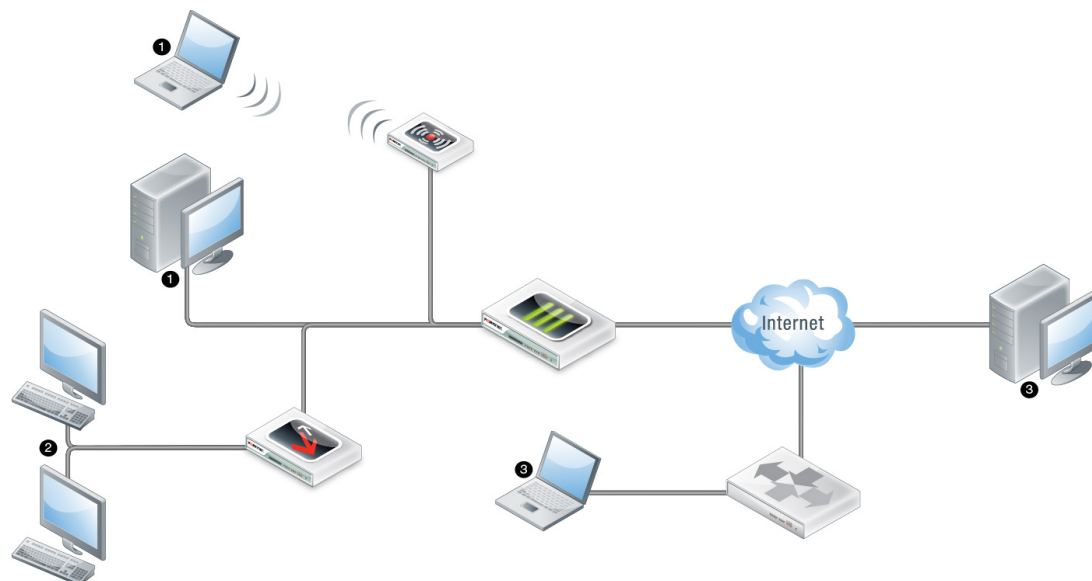
After the FortiGate configuration has been completed, you can proceed with FortiClient configuration. Configure your Windows PC on the corporate network with the default gateway set to the IP of the FortiGate.

## FortiClient endpoint network topologies

The following FortiClient Endpoint Profile topologies are supported:

- Client is directly connected to FortiGate; either to a physical port, switch port or WiFi SSID.<sup>1</sup>  
This topology supports client registration, configuration sync, and endpoint profile enforcement.
- Client is connected to FortiGate, but is behind a router or NAT device.<sup>2</sup>  
This topology supports client registration and configuration sync.
- Client is connected to FortiGate across a VPN connection.<sup>3</sup>  
This topology supports client registration, configuration sync, and endpoint profile enforcement.

**Figure 34:**Network topologies



### Configure FortiClient for Endpoint Management:

#### 1. Download and install the FortiClient software.

Open a web browser from your workstation and attempt to open a web page, the web page will be directed to the Captive Portal. Follow the instructions in the portal to download and install FortiClient.



To allow users to download FortiClient, you must enable this setting in the *SSL VPN Portal* on your FortiGate device. To enable this feature, go to *VPN > SSL > Portal* and select *Create New* in the toolbar.

**Figure 35:**Captive portal block page



### Endpoint Security Required

The use of this security policy requires that the latest FortiClient Endpoint Security software and antivirus signature package are installed.

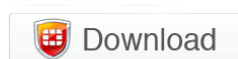
#### Please make sure:

1. FortiClient is installed and running,
2. FortiClient is registered with FortiGate and currently in "online" status, and
3. the "Disable configuration sync with FortiGate" option in FortiClient settings is turned off.

Installing FortiClient requires that you have administrator privileges on your computer. If you do not, please contact your network administrator to have FortiClient installed.

#### Installation Instructions for Windows:

1. Click on the button below to download the FortiClient installer file.
2. Double-click the installer file and this will run a standard installation.
3. Follow the instructions on screen to install FortiClient.



## 2. Register FortiClient.

After FortiClient completes installation, FortiClient will automatically launch and search for a FortiGate device for registration.

There are four ways that the FortiClient/FortiGate communication is initiated:

- FortiClient will attempt to connect to the default gateway IP address.
- FortiClient will attempt endpoint control registration over VPN (if configured on the FortiGate)
- FortiClient will attempt to connect to a remembered FortiGate
- FortiClient will attempt to connect to a redundant FortiGate



Your personal computer's default gateway IP should be configured to be the IP set in the FortiGate interface.

FortiClient will search for available FortiGate devices to complete registration. You can include the option to prompt the user to enter the FortiClient registration key. Select the *FortiGate* icon in the FortiClient console to retry the search.

**Figure 36:**Registering to FortiGate dialog box

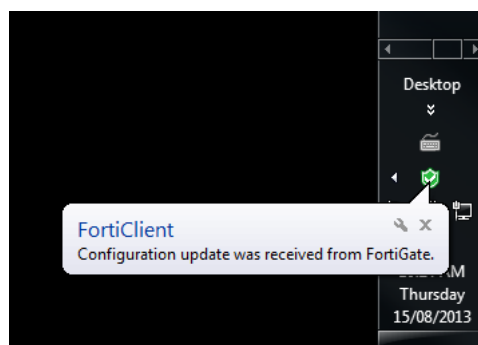


If FortiClient is unable to detect a FortiGate device, enter the IP address or URL of the device and select the *Retry* button. When FortiClient locates the FortiGate, you will be prompted to confirm the registration. Select the *Confirm* button to complete registration. Upon successful registration, the FortiGate will deploy the endpoint configuration.

## 3. Deploy the endpoint profile from the FortiGate device.

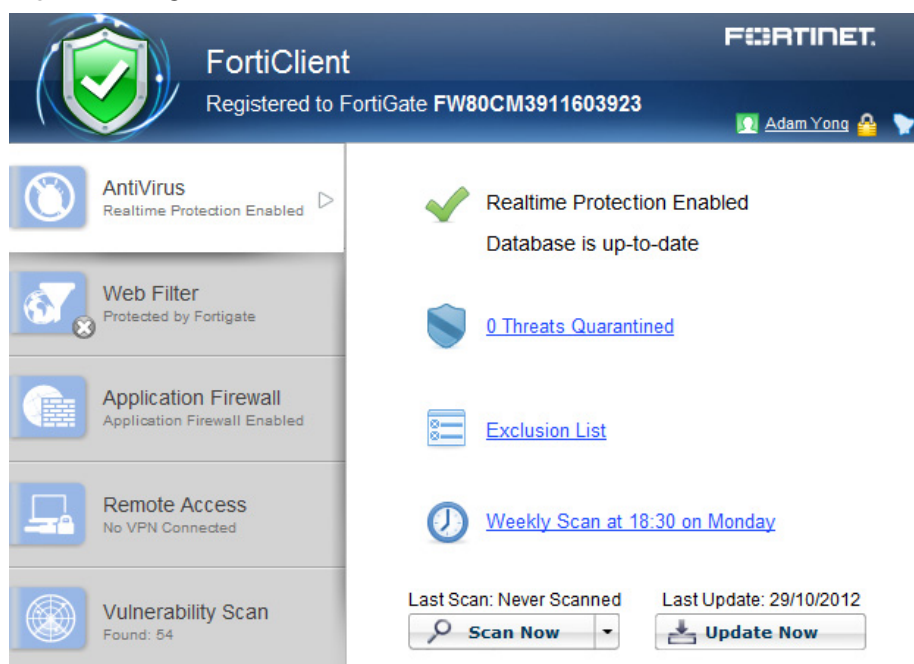
The FortiGate will deploy the endpoint profile after registration is complete. This endpoint profile will permit traffic through the FortiGate. A system tray bubble message will be displayed once update is complete.

**Figure 37:**Configuration update notification message



The FortiClient console will display that it is successfully registered to the FortiGate. The endpoint profile is installed on FortiClient.

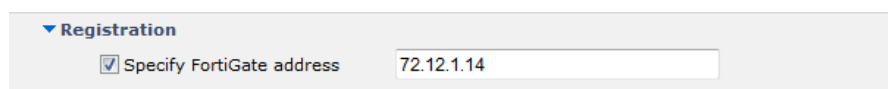
**Figure 38:**Registered FortiClient console



**Deploy the endpoint profile to clients over a VPN connection:**

1. In the FortiClient console, select *File > Settings*. Under *Registration* select *Specify FortiGate address* and enter the IP address and port number (if required) of the FortiGate's internal interface.

**Figure 39:**Specify FortiGate address



2. Configure an IPsec VPN connection from FortiClient to the management FortiGate. For more information on configuring IPsec VPN see “[Create a new IPsec VPN connection](#)” on [page 85](#).
3. Connect to the VPN.



4. You can now search for the FortiGate gateway. See “[Register FortiClient.](#)” on page 47 for more information.
5. After registration, the client is able to receive the endpoint profile.



When creating a new FortiClient VPN (IPsec) or SSL VPN tunnel configuration on your FortiGate device, you must enable *Endpoint Registration*. See the *IPsec VPN for FortiOS 5.0* and *SSL VPN for FortiOS 5.0* sections of the *FortiOS 5.0 Handbook* for more information.

## Remembered FortiGates

FortiClient v5.0 Patch Release 1 or later adds the option to remember up to 20 FortiGate devices when accepting the broadcast registration message. FortiClient can remember and register to multiple FortiGate devices. This feature enables users to move freely between office locations and register conveniently to each FortiGate device.

When prompted to enter a registration key, FortiClient can remember the registration password.

**Figure 40:**Option to remember FortiGate



Select the registration icon in the console to view information for the current registered device including the hostname, domain, serial number, and IP address.

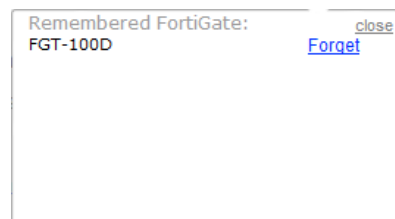
**Figure 41:**Remembered FortiGates



**Forget a remembered FortiGate:**

1. In the FortiClient console, click on the registered device name to display the registration dialog box.
2. Select *Show Remembered FortiGate* to show a list of FortiGate devices that FortiClient has previously registered with.
3. Select the device that you would like to remove from the remembered FortiGates list and select the *Forget* link.

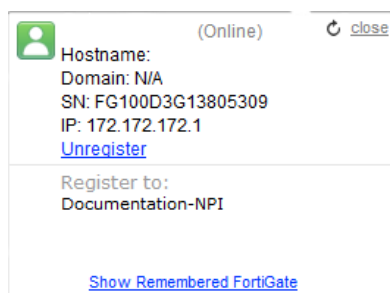
**Figure 42:**Remembered FortiGates list



**Unregister from FortiGate:**

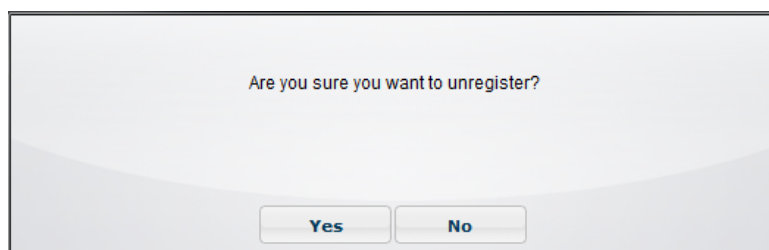
1. In the FortiClient console, click on the registered device name to display the registration details.  
The *Registration* dialog box appears.

**Figure 43:**Registration dialog box



2. Select *Unregister* in the registration dialog box.  
A confirmation dialog box is displayed.

**Figure 44:**Confirmation dialog box

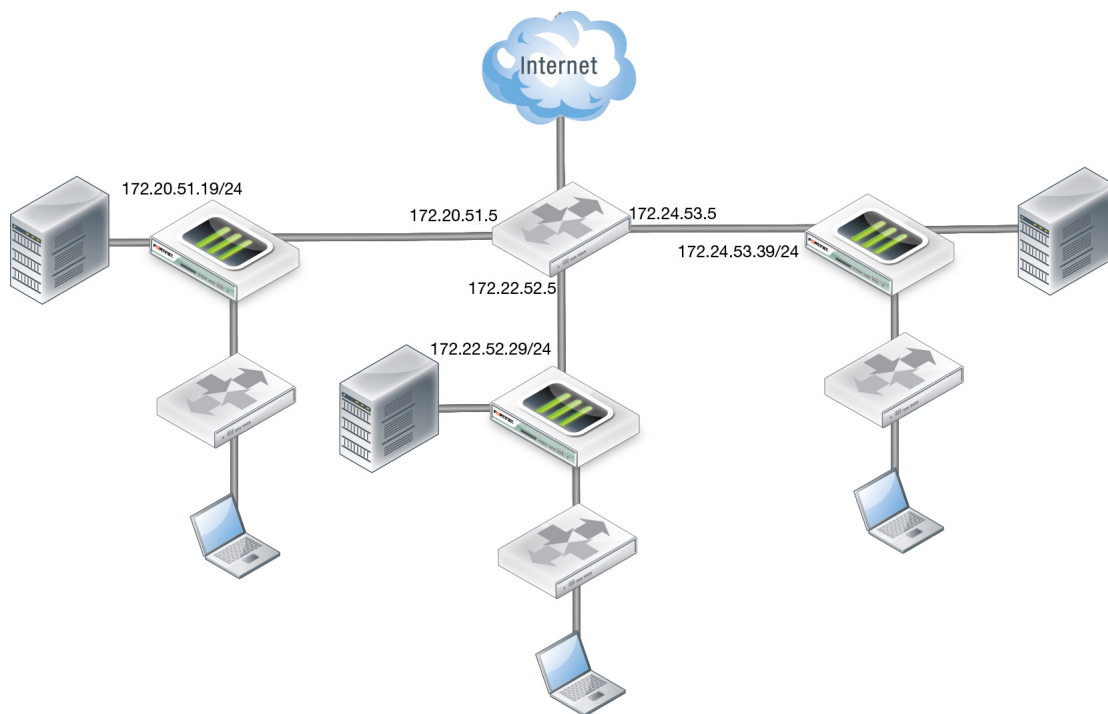


3. Select Yes to unregister FortiClient from the FortiGate selected.

## Roaming clients (multiple redundant gateways) example

The following figure illustrates three corporate FortiGate networks. Each FortiGate can reach each other over a WAN network. FortiClient can only reach one FortiGate at a time. FortiClient may connect directly to the FortiGate or through a NAT device.

**Figure 45:**Roaming clients topology



If FortiClient connects through a NAT device to the FortiGate, do not enforce endpoint control compliance on the FortiGate.

On each of the three FortiGate devices configure the following:

- Interface IP addresses
- Endpoint control profile
- Device identification in the interface
- Endpoint control profile in the applicable firewall policy
- Endpoint control synchronization

Endpoint control synchronization allows you to synchronize endpoint control for multiple FortiGate devices. To enable endpoint control synchronization via the CLI enter the following commands on your FortiGate:

```
config endpoint-control forticlient-registration-sync
  edit 1
    set peer-ip 172.20.52.19
  next
  edit 2
    set peer-ip 172.22.53.29
  end
end
```

The IP addresses set for the peer-ip field are the WAN IP addresses for each of the FortiGate devices in the synchronization group.

You need to add the following XML configuration to FortiClient for this synchronization group. Modify the configuration file to add the following:

```
<forticlient_configuration>
  <endpoint_control>
    <!-- List of redundant FortiGates, since 5.0.2 -->
    <fortigates>
      <fortigate>
        <name>Corporate Network</name>
        <addresses>10.18.51.9;10.20.52.19;10.22.53.29</addresses>
      </fortigate>
    </fortigates>
  </endpoint_control>
</forticlient_configuration>
```

The IP addresses are the internal IP addresses for each of the three FortiGates in the synchronization group. FortiClient can reach any of these IPs, one at a time.

If the three FortiGate devices share the same DNS name, use the following XML configuration:

```
<forticlient_configuration>
  <endpoint_control>
    <!-- List of redundant FortiGates, since 5.0.2 -->
    <fortigates>
      <fortigate>
        <name>Fortinet Americas</name>
        <addresses>fct_americas.fortinet.com</addresses>
      </fortigate>
    </fortigates>
  </endpoint_control>
</forticlient_configuration>
```

The DNS server should return one reachable FortiGate IP address for the domain name used.

You will need to manually add FortiClient to the synchronization group when FortiClient initially registers with the FortiGate. Once added, no further action is required.

On your FortiGate, use the following CLI command to list all registered FortiClient endpoints:

```
# diagnose endpoint registration list
FortiClient #1:
  UID                        = BA0FA25998FD4EB3A81072DC3E1799F4
  vdom                      = root
  status                    = registered
  registering time          = Tue Mar  5 15:41:36 2013
  registration expiry time  = Tue Mar 12 15:41:36 2013
  source IP                 = 192.168.10.100
  user                      = lindseyk
  host OS                   = Microsoft Windows 7 Enterprise Edition,
                           64-bit Service Pack 1 (build 7601)
  local registration        = no
  remote registration SN    = FG10DH3G11604696
```

The `local registration` entry indicates whether this specific FortiClient is registered to this FortiGate, or to another FortiGate within the synchronization group.

If any of the FortiGate devices require a password to complete registration, you can use the following XML configuration to provide password information to FortiClient:

```
<forticlient_configuration>
  <endpoint_control>
    <!-- List of redundant FortiGates, since 5.0.2 -->
    <fortigates>
      <fortigate>
        <name>Corporate Network</name>
        <addresses>10.18.51.9;10.20.52.19;10.22.53.29</addresses>
        <registration_password>uNbre@kable</registration_password>
      </fortigate>
    </fortigates>
  </endpoint_control>
</forticlient_configuration>
```

## View FortiClient registration in the FortiGate Web-based Manager

You can view all registered FortiClient agents in the FortiGate Web-based Manager. Each new registration will be automatically added to the device table. To view registered devices go to *User & Devices > Device > Device Definition*. The state for the new FortiClient registration is listed as *Registered*.

**Figure 46:**FortiGate device details

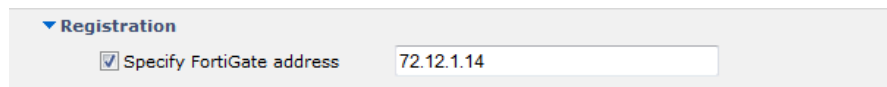
Device	OS	User	Hostname	IP Address	Custom Group	FortiClient State	Last Seen
<b>Device Details</b> Device: b4:99:ba:f7:ca:5c OS: Windows / 7 (x64) Hostname: spirit Username: punky IP Address: 192.168.10.111 Last Seen: 1 second ago (internal) FortiClient State: Registered (default)		Administrator	chris-9980239c0	192.168.12.201		N/A	11 seconds ago (internal)
				192.168.10.1		N/A	Friday (wan1)
			WIN-C19F9G6D7U2	172.17.61.214		N/A	Friday (wan1)
				172.17.61.64		N/A	Friday (wan1)
				172.17.61.140		N/A	8 seconds ago (wan1)
				172.17.61.60		N/A	40 seconds ago (wan1)
				172.17.61.49		N/A	34 minutes ago (wan1)
		qa	QA-PC1	192.168.10.205		Blocked/Captive Portal	1 second ago (internal)
				172.17.61.17		N/A	3 minutes ago (wan1)
				172.17.61.45		N/A	14 minutes ago (wan1)
				172.17.61.42		N/A	8 minutes ago (wan1)
b4:99:ba:f7:ca:5c	Windows / 7 (x64)	punky	spirit	192.168.10.111		Registered (default)	1 second ago (internal)
d4:be:d9:d8:de:57			Hong-PC-163	192.168.10.201		N/A	3 hours ago (internal)
00:40:f4:91:a0:c2		jinhai	JINHAIWIN7-64			N/A	

## Configure the FortiGate IP in FortiClient for registration

The FortiClient administrative user can specify a FortiGate IP address for registration and client configuration management. When an unregistered FortiClient starts up, FortiClient will list all reachable FortiGates for endpoint control registration in the registration drop-down list. The list will include any FortiGate that sends endpoint control broadcasts. Select the FortiGate icon in the FortiClient console to list discovered FortiGates. Any IP address provided in the *Settings* page under the *Registration* element is included in the list.

To configure a FortiGate IP address in FortiClient, select *File > Settings*. Select *Registration* to expand the drop-down menu. Enter the IP address and port number (if required) of the FortiGate's internal interface.

**Figure 47:**Configure FortiGate in FortiClient

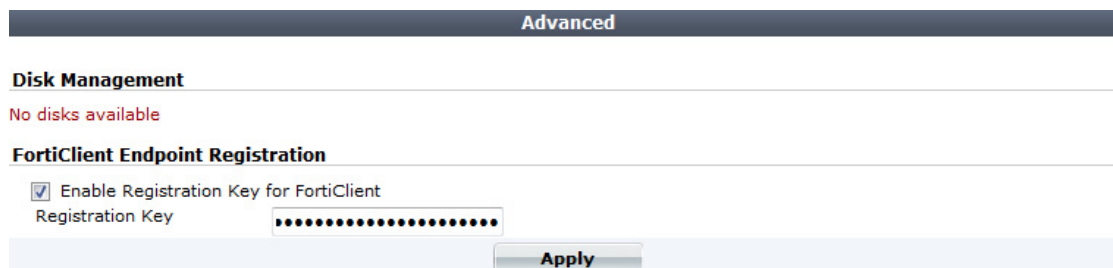


The FortiClient settings are locked, and cannot be modified after registration to a FortiGate is completed. See [“Configuration lock”](#) on page 110 for information on configuring this feature.

## Enable FortiClient endpoint registration key (optional)

To enable *FortiClient Endpoint Registration Key* in the FortiGate Web-based Manager, select *System > Config > Advanced*. Select *Enable Registration Key for FortiClient*, enter the *Registration Key* and select *Apply*.

**Figure 48:**Enable FortiClient endpoint registration key on FortiGate



The FortiClient user will need to enter the same registration key to successfully register FortiClient to the FortiGate.

## Endpoint registration with Active Directory (AD) user groups

The user's AD domain name and group are both sent to the FortiGate during endpoint registration. Administrators may configure the FortiGate to deploy endpoint and/or firewall profiles based on the end user's AD domain group. This feature requires FortiClient v5.0 Patch Release 4 or later and FortiOS v5.0 Patch Release 3 or later.

The following steps are discussed in more details:

- [Configure users and groups on your AD server](#)
- [Configure your FortiAuthenticator](#)
- [Configure your FortiGate](#)
- [Connect to the FortiGate using FortiClient endpoint](#)
- [Monitoring client registrations](#)

### Configure users and groups on your AD server

Create the user accounts and groups on the AD server. Groups may have any number of users. A user may belong to more than one group at the same time. Groups may be nested.

### Configure your FortiAuthenticator

Configure FortiAuthenticator to use the AD server that you created. For more information see the [FortiAuthenticator Administration Guide](#).

### Configure your FortiGate

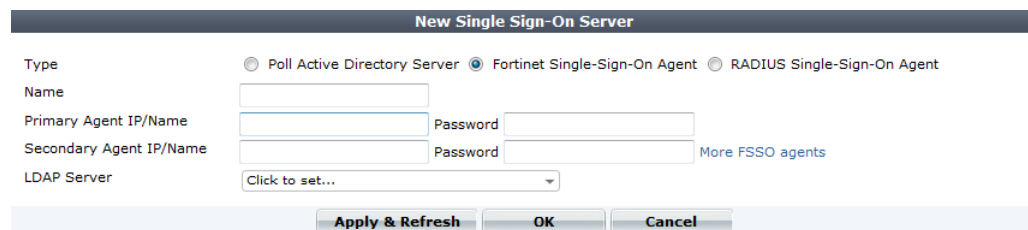
Configure FortiGate from the Web-based Manager as listed below.

#### Add the FortiAuthenticator or Fortinet Single Sign-On Agent (FSSO)

1. Go to *User & Device > Authentication > Single Sign-On*.
2. Select *Create New* in the toolbar.

The *New Single Sign-On Server* window opens.

**Figure 49:** New single sign-on server window



3. In the type fields, select *Fortinet Single-Sign-On Agent*.
4. Enter the information required for the agent. This includes the name, primary and secondary IP address and password. Select an LDAP server in the drop-down menu if applicable. Select *More FSSO agents* to add up to three additional agents.
5. Select *OK* to save the agent configuration.

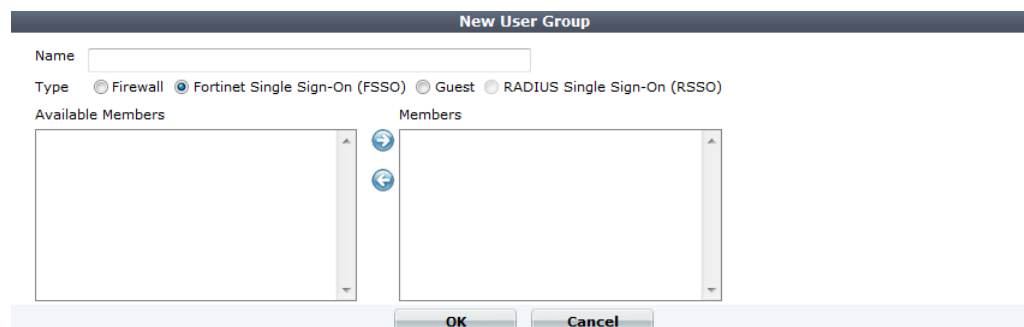


### Create a user group

1. Go to *User & Device > User > User Group*.
2. Select *Create New* in the toolbar.

The *New User Group* window opens.

**Figure 50:** New user group window



3. In the type field, select *Fortinet Single-Sign-On (FSSO)*.
4. Enter a name for the new group and select members from the available members using the right and left directional arrow icons.
5. Select OK to save the group configuration.

### Configure the endpoint profile

1. Go to *User & Device > Device > Endpoint Profile*.
2. In the toolbar, select the plus (+) icon to create a new endpoint profile.

The *New Endpoint Profile* window opens.

**Figure 51:**New endpoint profile window

**New Endpoint Profile**

Profile Name

Comments  0/255

Assign Profile To:

Device Groups

**User Groups**

Users

**FortiClient Configuration Deployment**

**Windows and Mac**

AntiVirus Realtime Protection on Client

Application Firewall

Web Category Filtering

Endpoint Vulnerability Scan on Client

Client VPN Provisioning

Upload Logs to FortiAnalyzer/FortiManager

Use FortiManager for client software/signature update

Advanced Options

**iOS**

Web Category Filtering

Client VPN Provisioning

Distribute Configuration Profile (.mobileconfig file)

**Android**

Web Category Filtering

Client VPN Provisioning

3. Enter a profile name and optional comments.
4. In the *User Groups* drop-down menu select the FSSO user group. Additional groups can be added by selecting the green plus (+) icon to the right of the drop-down menu.
5. Configure FortiClient configuration deployment as required.
6. Select *OK* to save the new endpoint profile.

For more information see [“Configure endpoint management” on page 38](#).



Create any number of endpoint profiles with different groups and different settings. The default profile will be assigned to users who register successfully but have no matching endpoint profile.

### Configure the firewall policy:

1. Configure the firewall policy as described in [“Configure endpoint management” on page 38](#). Ensure that *Compliant with Endpoint Profile* is selected in the *Authentication Rules* dialog box.

## Connect to the FortiGate using FortiClient endpoint

The Microsoft Windows system on which FortiClient is installed should join the domain of the AD server configured earlier. Users may login with their domain user name.

Following this, FortiClient endpoint registrations will send the logged-in user's name and domain to the FortiGate. The FortiGate will assign the appropriate profiles based on the configurations.

## Monitoring client registrations

The following FortiOS CLI command lists information about registered clients. This includes domain-related details for the client (if any).

```
diagnose endpoint record-list
Record #1:
  IP_Address = 10.87.102.215(1)
  MAC_Address = 00:0C:29:38:1A:54
  Host MAC_Address = 00:0C:29:38:1A:54
  VDOM = root
  Registration status: Forticlient installed but not registered
  Online status: offline
  FCC connection handle: 2
  FortiClient version: 5.0.4
  AVDB version: 17.746
  FortiClient app signature version: 4.351
  FortiClient vulnerability scan engine version: 1.315
  FortiClient feature version status: 0
  FortiClient UID: 07A1F8489C9F4A21BE910481ACA0442D (0)
  FortiClient config dirty: 0:1:1
  FortiClient server config: 7cb6a441eb85873f9cf4bb8c11adade4::
  FortiClient config: 0
  FortiClient iOS server mconf:
  FortiClient iOS mconf:
  FortiClient iOS server ipsec_vpn mconf:
  FortiClient iOS ipsec_vpn mconf:
  Endpoint Profile: engineering_team
  Auth_AD_groups:
  Auth_group: engineering
  Auth_user: thomasp
  Host_Name: Eng_Client72
  OS_Version: Microsoft Windows 7 Enterprise Edition, 64-bit Service
    Pack 1 (build 7601)
  Host_Description: AT/AT COMPATIBLE
  Domain:
  Last_Login_User: thomasp
  Host_Model: OptiPlex 390
  Host_Manufacturer: Dell Inc.
  CPU_Model: Intel(R) Core(TM) i5-2400 CPU @ 3.10GHz
  Memory_Size: 4096
  Installed features: 55
  Enabled features: 53
  System Uptime: 66195
  FortiClient log upload: 0 since Wed Dec 31 17:00:00 1969
  Last connection: Mon Jun 10 08:52:56 2013
```

# Antivirus

## FortiClient Antivirus

FortiClient v5.0 includes an antivirus module to scan system files, executable files, dynamic-link library (DLL) files, and drivers. FortiClient will also scan for and remove rootkits.

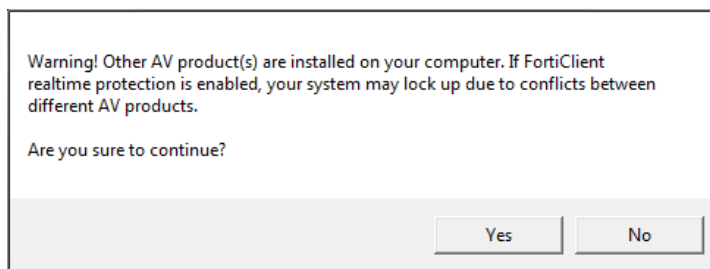
This section describes how to enable antivirus and configuration options.

### Enable/disable antivirus

To enable or disable FortiClient antivirus real-time protection, toggle the *[Enable/Disable]* option in the FortiClient console.

If you have another antivirus program installed on your system, FortiClient will prompt the following dialog box warning that your system may lock up due to conflicts between different AV products.

**Figure 52:**Conflicting antivirus warning

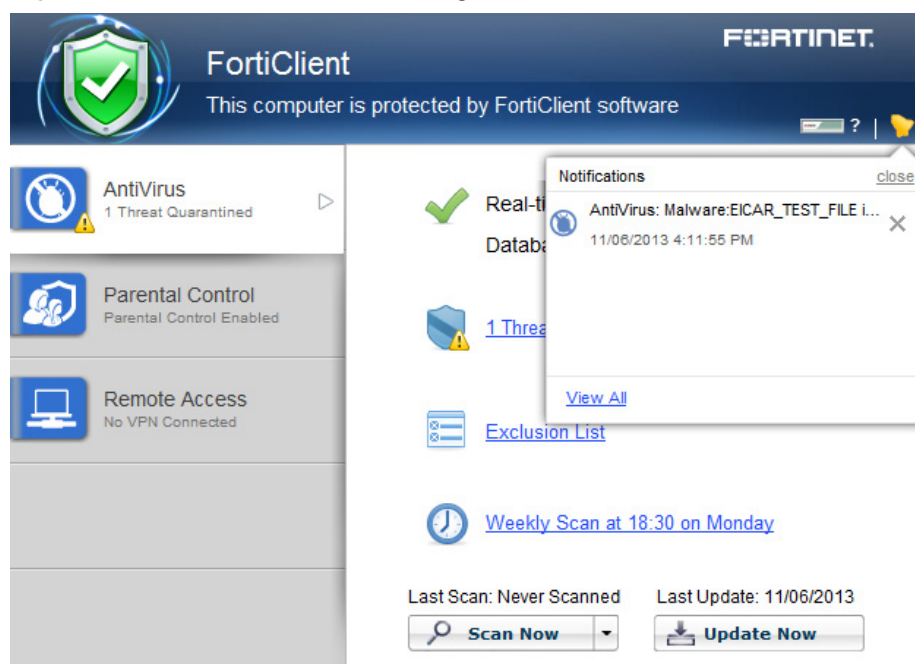


It is recommended to remove the conflicting antivirus product before installing FortiClient or enabling the antivirus real-time protection feature.

### Notifications

Select the bell icon in the FortiClient console to view all notifications. When a virus has been detected, an exclamation (!) icon will appear in the antivirus tree-menu tab. The bell icon will change from gray to yellow. Select *View All* to view all antivirus event notifications.

**Figure 53:**Antivirus notifications dialog box



## Scan now

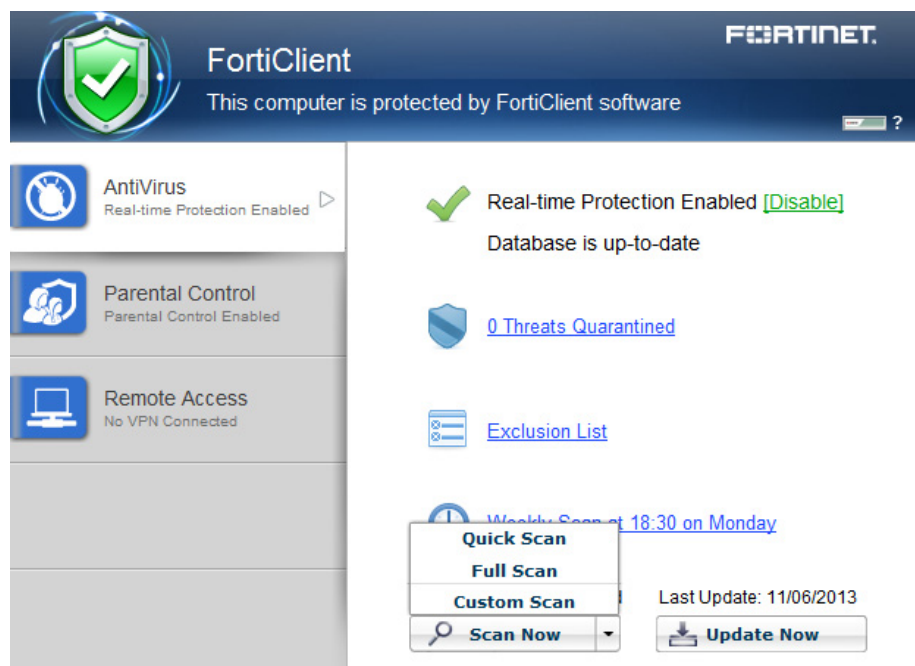
To perform on-demand antivirus scanning, select the *Scan Now* button in the FortiClient console. Use the drop-menu to select *Custom Scan*, *Full Scan*, or *Quick Scan*. The console displays the date of the last scan above the button.

*Custom Scan* runs the rootkit detection engine to detect and remove rootkits. *Custom Scan* allows you to select a specific file folder on your local hard disk drive (HDD) to scan for threats.

*Full Scan* runs the rootkit detection engine to detect and remove rootkits. *Full Scan* then performs a full system scan including all files, executable files, dll's, and drivers for threats.

*Quick System Scan* runs the rootkit detection engine to detect and remove rootkits. *Quick System Scan* only scans executable files, dll's, drivers that are currently running for threats.

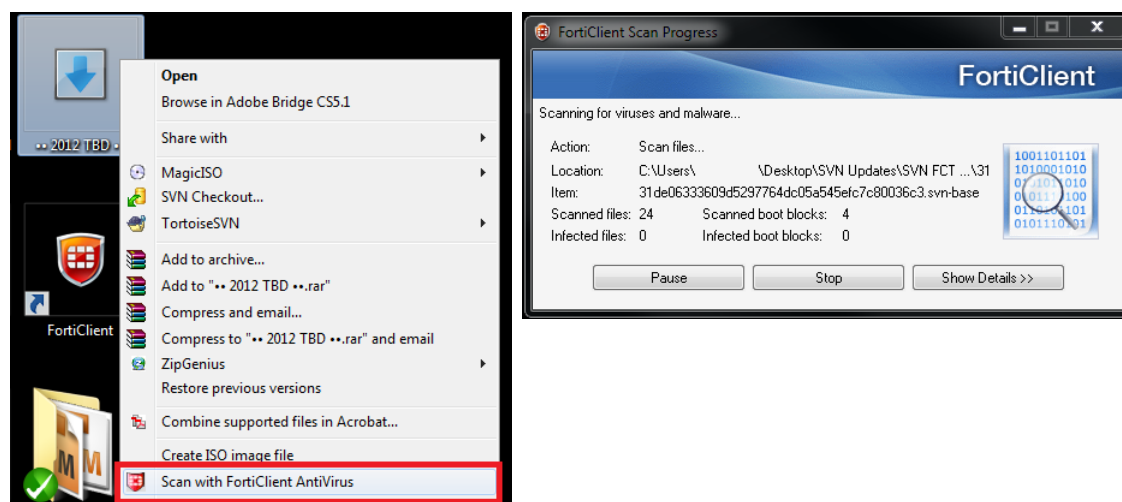
**Figure 54:**Antivirus scan options



## Scan a file or folder on your workstation

To perform a virus scan a specific file or folder on your workstation, right-click the file or folder and select *Scan with FortiClient AntiVirus*.

**Figure 55:**Scan a specific file or folder



## Update now

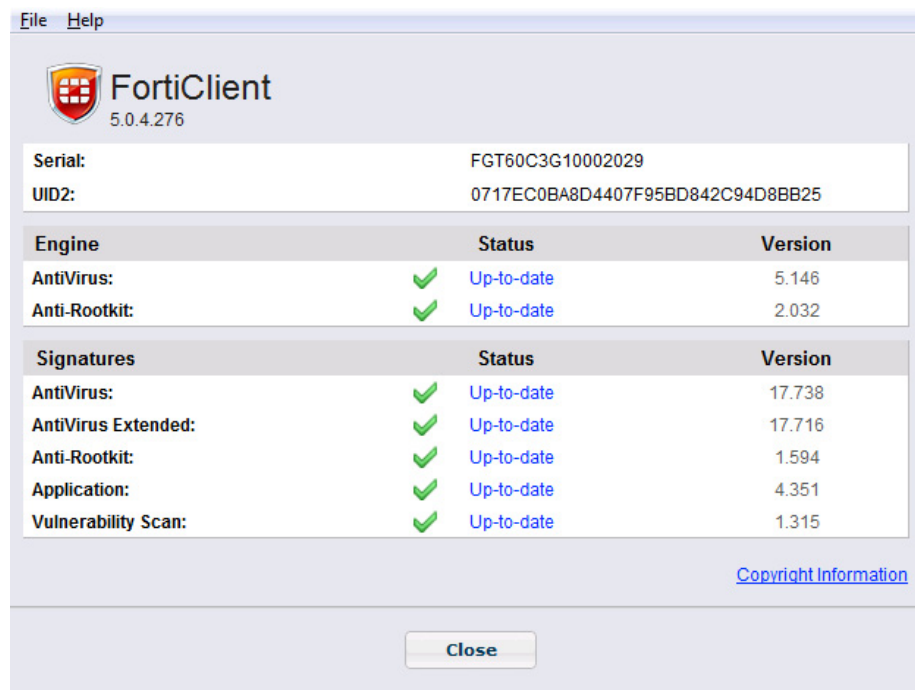
To perform on-demand update of FortiClient version, engines, and signatures, select the *Update Now* button in the FortiClient console. The console notes the date of the last update above the button.

To view the current FortiClient version, engine, and signature information, select *Help* in the toolbar, and select *About* in the drop-down menu.



You can select to use a FortiManager device for client software and signature updates. When configuring the endpoint profile, select *Use FortiManager for client software/signature updates* to enable the feature and enter the IP address of your FortiManager device.

**Figure 56:** About FortiClient page



## Schedule antivirus scanning

To schedule antivirus scanning, select *Weekly Scan* in the content pane.

**Figure 57:**Antivirus scheduling page

Configure the AntiVirus Scan Schedule

Schedule Type: Weekly

Scan On: Monday

Start: 18 : 30 (HH:MM)

Scan Type: Full system scan

OK Cancel

Configure the following settings:

<b>Schedule Type</b>	Select Daily, Weekly or Monthly in the drop-down menu.
<b>Scan On</b>	For Weekly scheduled scan, select the day of the week in the drop-down menu. For Monthly scheduled scan, the day of the month in the drop-down menu.
<b>Start</b>	Select the start time in the drop-down menus. The time format is represented in hours and minutes, 24-hour clock.
<b>Scan Type</b>	<p>Select the scan type:</p> <p>Custom Scan runs the rootkit detection engine to detect and remove rootkits. Custom Scan allows you to select a specific file folder on your local hard disk drive (HDD) to scan for threats.</p> <p>Full Scan runs the rootkit detection engine to detect and remove rootkits. Full Scan then performs a full system scan including all files, executable files, dll's, and drivers for threats.</p> <p>Quick System Scan runs the rootkit detection engine to detect and remove rootkits. <i>Quick System Scan</i> only scans executable files, dll's, drivers that are currently running for threats.</p>

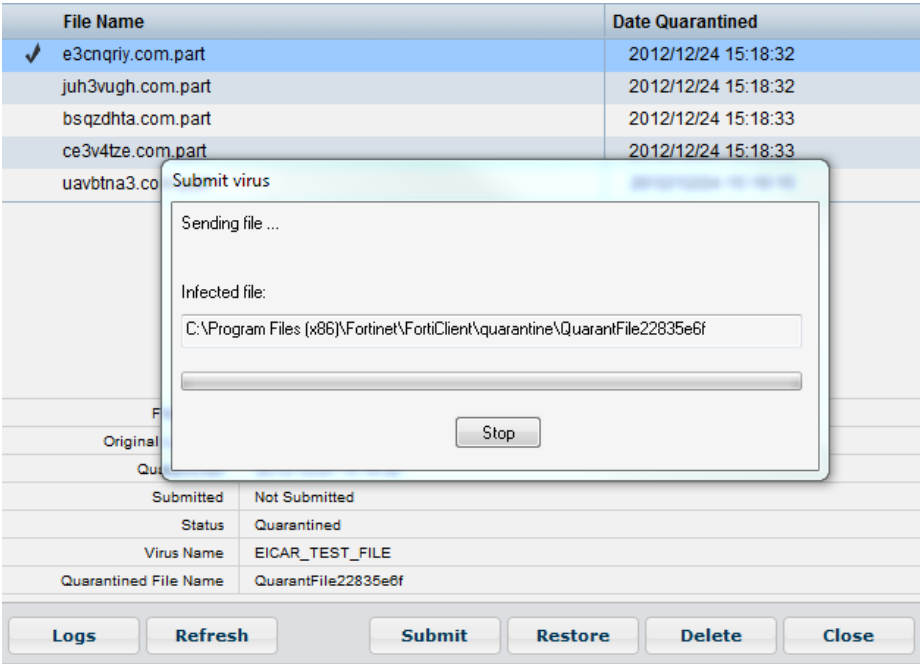
Select *OK* to save the setting.



# View quarantined threats

To view quarantined threats, select *Threats Quarantined* in the FortiClient console. In this page you can view, restore, or delete the quarantined file. You can also submit the file to FortiGuard.

**Figure 58:**Threats quarantined page



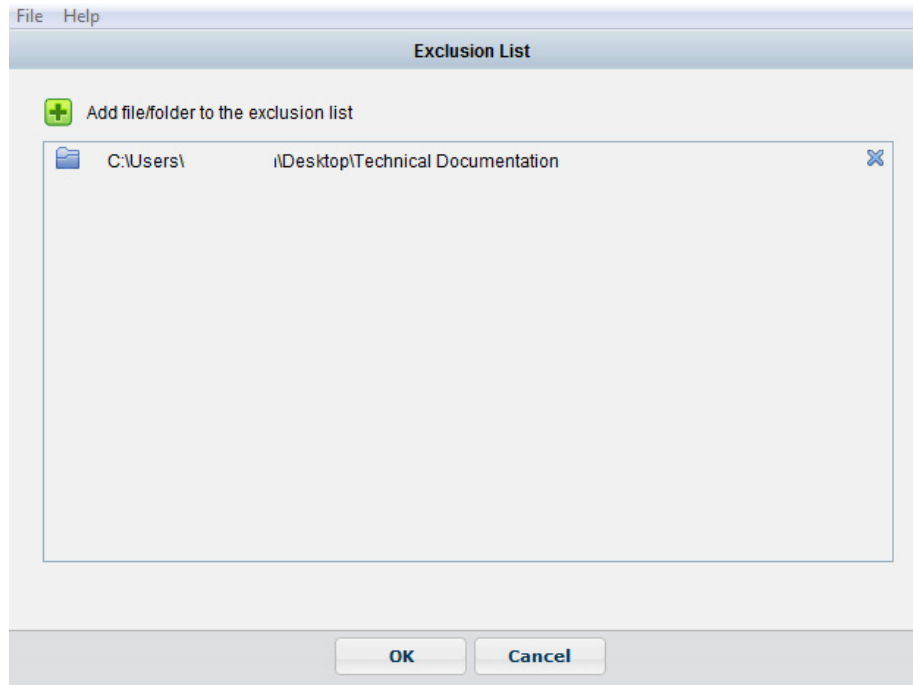
This page displays the following:

File Name	The name of the file.
Date Quarantined	The date and time that the file was quarantined by FortiClient.
File Information	Select a file from the list to view detailed information including the quarantined location, status, virus name, and quarantined file name.
Logs	Select to view FortiClient log data.
Refresh	Select to refresh the list.
Submit	Select to submit the quarantined file to FortiGuard.
Restore	Select to add the selected file/folder to the exclusion list.
Delete	Select to delete the quarantined file.
Close	Select to close the page and return to the FortiClient console.

## Add files/folders to an exclusion list

To add files/folders to the antivirus exclusion list, select *Exclusion List* in the content pane. In the following configuration page, select the plus '+' symbol to add files or folders to the list. Any files or folders in this exclusion list will not be scanned.

**Figure 59:**Antivirus exclusion list page

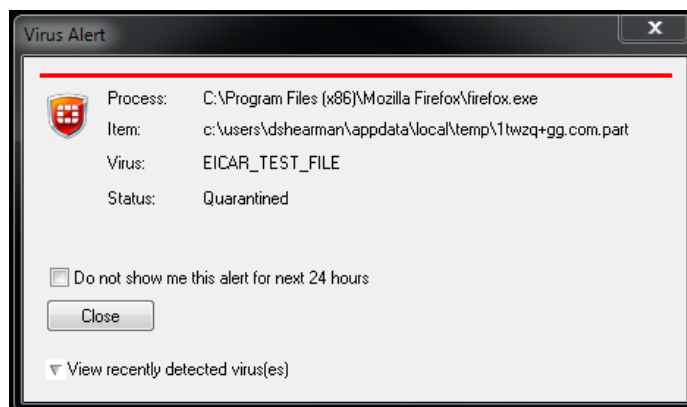


Select *OK* to save the setting.

## Antivirus warning

When FortiClient antivirus detects a virus while attempting to download a file via a web-browser, you will receive a warning dialog message similar to [Figure 60](#). Browse to the *Threat Quarantine* menu in the console to view details for the detected threat.

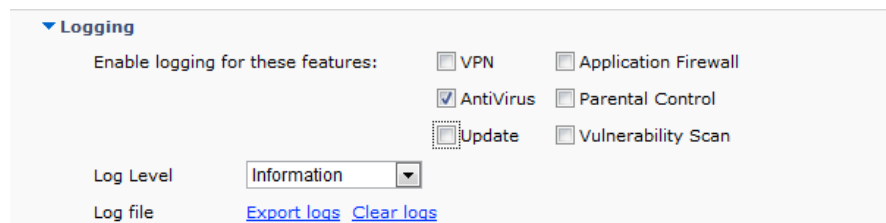
**Figure 60:**Example virus warning message



## Antivirus logging

To configure antivirus logging, select *File* in the toolbar and *Settings* in the drop-down menu. Select *Logging* to view the drop-down menu.

**Figure 61:**Logging options



Configure the following settings:

### Logging

#### Enable logging for these features

Select antivirus to enable logging for this feature.

#### Log Level

Select the level of logging:

Emergency: The system becomes unstable.

Alert: Immediate action is required.

Critical: Functionality is affected.

Error: An error condition exists and functionality could be affected.

Warning: Functionality could be affected.

Notice: Information about normal events.

Information: General information about system operations.

Debug: Debug FortiClient.

### Log file

#### Export logs

Select to export logs to your local hard disk drive (HDD) in .log format.

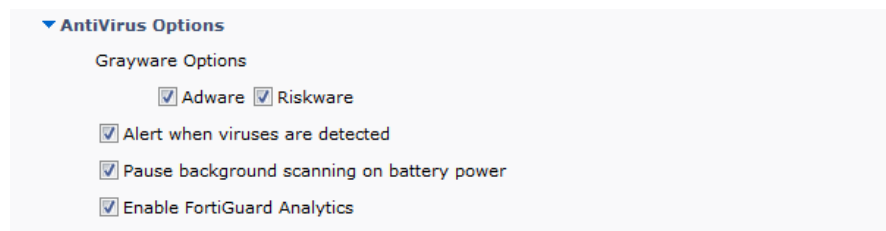
#### Clear logs

Select to clear all logs. You will be presented a confirmation window, select Yes to proceed.

## Antivirus options

To configure antivirus options, select *File* in the toolbar, and *Settings* in the drop-down menu. Select *AntiVirus Options* to view the drop-down menu. In this menu you can configure options outlined in the following figure and table.

**Figure 62:**Antivirus options



Configure the following settings:

Antivirus Options	
<b>Grayware Options</b>	Grayware is an umbrella term applied to a wide range of malicious applications such as spyware, adware and key loggers that are often secretly installed on a user's computer to track and/or report certain information back to an external source without the user's permission or knowledge.
<b>Adware</b>	Select to enable adware detection and quarantine during the antivirus scan.
<b>Riskware</b>	Select to enable riskware detection and quarantine during the antivirus scan.
<b>Alert when viruses are detected</b>	Select to have FortiClient provide a notification alert when a threat is detected on your personal computer.
<b>Pause background scanning on battery power</b>	Select to pause background scanning when your personal computer is operating on battery power.
<b>Enable FortiGuard Analytics</b>	Select to automatically send suspicious files to the FortiGuard Network for analysis.

When registered to FortiGate, you can select to enable or disable FortiClient Antivirus Realtime Protection on the Client in the Endpoint Profile.

### To enable Antivirus Realtime Protection on Client in the Endpoint Profile:

1. Login to your FortiGate.
2. In the left tree menu, select *User & Device > Device > Endpoint Profile*.
3. In the right pane, in the Edit Endpoint Profile page, in the *FortiClient Configuration Deployment* section, toggle the *AntiVirus Realtime Protection on Client* button to *ON*.

**Figure 63:**Edit endpoint profile page

**Edit Endpoint Profile** default

Profile Name: default

Comments: Write a comment... 0/255

**FortiClient Configuration Deployment**

**Windows and Mac**

☒ **ON** AntiVirus Realtime Protection on Client

☒ **ON** Application Firewall default

☒ **ON** Web Category Filtering default

☐ Disable Web Category Filtering when protected by this FortiGate

☒ **ON** Endpoint Vulnerability Scan on Client

Schedule Scan Type: ☐ Daily ☐ Weekly ☒ Monthly

☒ Initiate Scan After Client Registration

☒ **ON** Client VPN Provisioning

VPN Name:

Type: ☒ IPsec VPN ☐ SSL-VPN

Remote Gateway:

Authentication Method: Preshared Key

Preshared Key:

☐ Upload Logs to FortiAnalyzer/FortiManager

☐ Use FortiManager for client software/signature update

☒ **ON** Advanced Options

Dashboard:

☒ AntiVirus ☒ WebFilter ☒ Application Firewall

☒ VPN ☒ Vulnerability Scan ☐ Banner

Registration Dialog:

☒ Profile Details

**iOS**

☐ OFF Web Category Filtering New Profile

☐ OFF Client VPN Provisioning

☐ OFF Distribute Configuration Profile (.mobileconfig file)

**Android**

☐ OFF Web Category Filtering New Profile

☐ OFF Client VPN Provisioning

**Apply**

4. Toggle the *Advanced Options* button to *ON* and select the checkbox for *AntiVirus*.
5. Select *Apply* to save the profile.

The FortiGate will send the Endpoint Profile configuration update to registered clients.

**Figure 64:**Configuration update was received from FortiGate.

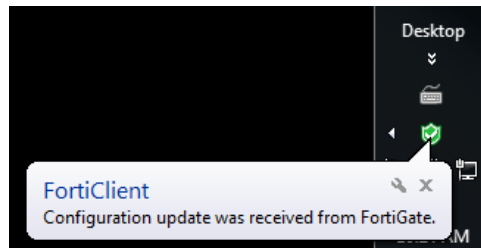


Figure 65 illustrates antivirus settings received by the FortiGate endpoint control profile. When registered to a FortiGate, antivirus settings are enabled and configured in the FortiGate endpoint profile.

**Figure 65:**Antivirus settings in endpoint control profile



# Parental Control/Web Filtering

Parental Control/Web Filtering allows you to block, allow, warn, and monitor web traffic based on URL category. URL categorization is handled by the FortiGuard Distribution Network (FDN).



When FortiClient is registered to a FortiGate, the *Parental Control* module will reflect *Web Filtering*. You can disable *Web Category Filtering* in FortiClient from the FortiGate endpoint profile. If the FortiClient device is behind a FortiGate, the client device will use the web filter profile from the FortiGate.

---

The FortiClient Endpoint Control feature enables the site administrator to distribute Web Filtering profile from a FortiGate device. The overall process is as follows:

- Create a Web Filter profile on the FortiGate
- Add the Web Filter profile to the Endpoint Control profile on the FortiGate

## **Step 1: Create a Web Filter Profile**

Use the following steps to create a custom Web Filter profile on the FortiGate Web-based Manager:

1. Login to the FortiGate
2. In the left tree menu, select *Security Profiles > Web Filter > Profiles*.
3. To create a new profile, click the “Create New” icon (a plus “+” symbol in the upper-right corner).
4. The *New Web Filter Profile* page opens.

**Figure 66:**New web filter profile page

5. Enter a name for the profile.
6. Select the *FortiGuard Categories* checkbox. This will allow you to modify the categories.



If the FortiGate device is not licensed, you will receive an dialog box advising that traffic may be blocked if this option is enabled.



FortiClient supports the following Web Filter Profile settings: FortiGuard Categories and Enable Safe Search. All other settings apply to FortiGate only.

7. Modify a category. For example, right-click on the *General Interest – Business* category. In the menu, select the *Block* option.
8. Block a sub-category. For example, click the *General Interest – Personal* group to expand the category menu. Scroll down to where the *Games* sub-category is located. Right-click the *Games* sub-category, and select the *Block* option.



9. Select to enable safe search. You can select the checkbox to enable search engine safe search and YouTube education filter.
10. Select *Apply* to save the profile.

## Step 2: Add the Web Filter profile to the Endpoint Profile

1. In the left tree menu, select *User & Device > Device > Endpoint Profile*.
2. In the right pane, in the Edit Endpoint Profile page, in the *FortiClient Configuration Deployment* section, toggle the *Web Category Filtering* button to *ON*.

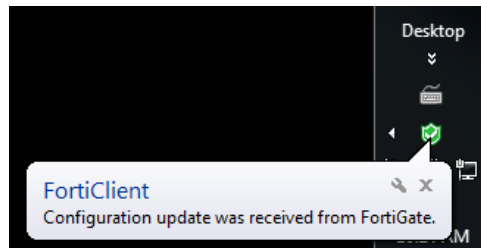
**Figure 67:** Edit Endpoint Profile page

The screenshot displays the 'Edit Endpoint Profile' interface. At the top, there's a 'Profile Name' field set to 'default' and a 'Comments' field. Below this is the 'FortiClient Configuration Deployment' section. Under 'Windows and Mac', several features are listed with 'ON' status indicators: 'AntiVirus Realtime Protection on Client', 'Application Firewall' (set to 'default'), 'Web Category Filtering' (set to 'default' and highlighted with a red box), and 'Endpoint Vulnerability Scan on Client'. There's also a checkbox for 'Disable Web Category Filtering when protected by this FortiGate'. Further down, 'Client VPN Provisioning' is 'ON', and 'Advanced Options' is 'ON' (highlighted with a red box). The 'Advanced Options' section includes a 'Dashboard' with checkboxes for 'AntiVirus', 'VPN', 'WebFilter' (checked), 'Vulnerability Scan', 'Application Firewall', and 'Banner'. At the bottom, the 'iOS' and 'Android' sections show 'Web Category Filtering' as 'OFF'. An 'Apply' button is located at the bottom right of the page.

3. Select the Web Filter profile in the drop-down list.
4. Uncheck the checkbox for *Disable Web Category Filtering when protected by this FortiGate*.
5. Toggle the *Advanced Options* button to *ON* and select the checkbox for *WebFilter*.
6. Click *Apply* to save the profile.

The FortiGate will send the Endpoint Profile configuration update to registered clients.

**Figure 68:**Configuration update was received from FortiGate



The Web Filtering module is now available in FortiClient.

Figure 69 illustrates web filter profile settings received by the FortiGate endpoint control profile.

**Figure 69:**Web filter settings in the endpoint control profile

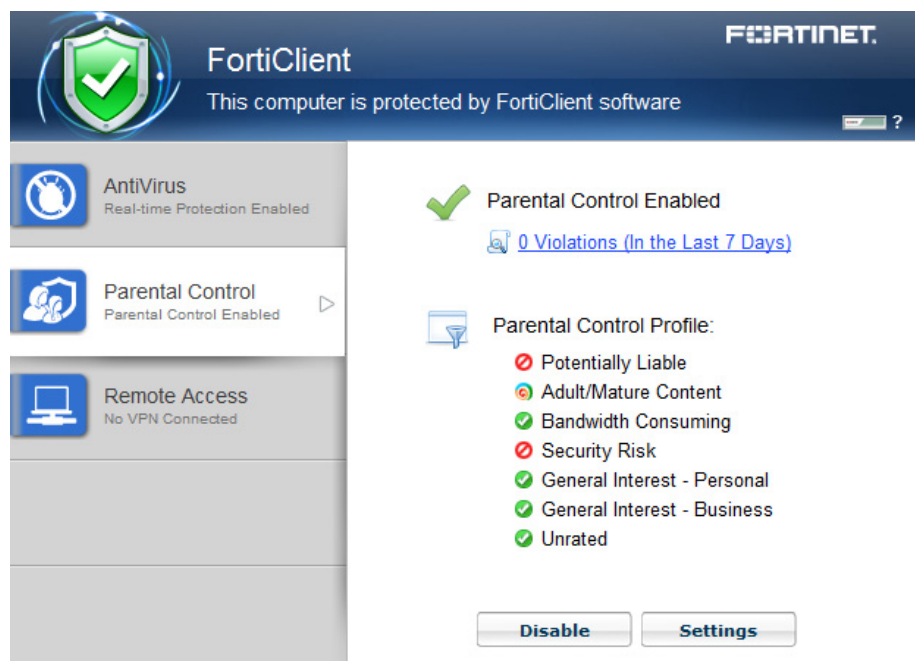


When FortiClient is not registered to FortiGate, you can enable or disable the Parental Control feature. You can define what sites are allowed or blocked and view violations.

## Enable/Disable Parental Control

To enable or disable FortiClient Parental Control/Web Filtering, toggle the *[Enable/Disable]* button in the FortiClient console. Parental Control is enabled by default.

**Figure 70:**Parental control module



<b>Enable/Disable</b>	Toggle to enable or disable Parental Control.
<b>Settings</b>	Select to configure the Parental Control profile.

## Parental Control settings

You can configure a profile to allow, block, warn, or monitor web traffic based on category under *Profile*. Use the right-click menu to set the action for the full category or sub-category.

You can add websites to the exclusion list and set the permission to allow or block. If the website is part of a blocked category, an allow permission in the *Exclusion List* would allow the user to access the specific URL.

**Figure 71:**Profile and exclusion list

**Profile**

- ☐ Adult/Mature Content
  - ☐ Abortion
  - ☐ Advocacy Organizations
  - ☐ Alcohol
  - ☐ Alternative Beliefs
  - ☐ Dating
  - ☐ Gambling
  - ☒ Lingerie and Swimsuit
  - ☐ Marijuana
  - ☐ Nudity and Risque

☒ Log all URLs  
☒ Enable Safe Search  
☒ Search Engine Safe Search (Google, Yahoo!, Bing, Yandex)  
☐ YouTube Education Filter

**Exclusion List**

The following web sites are explicitly blocked or allowed

Permission	URL
------------	-----

+ -

OK Cancel

Configure the following settings:

<b>Profile</b>	Select to allow, block, warn or monitor traffic by category or sub-category.
<b>Exclusion List</b>	Select to exclude websites that are explicitly blocked or allowed. Use the plus (+) icon to add websites and the minus (-) icon to delete websites from the list.
<b>Log all URLs</b>	Select to log all URLs.
<b>Enable Safe Search</b>	Select to enable safe search.
<b>Search Engine Safe Search</b>	Select to enable search engine safe search for Google, Yahoo!, Bing, and Yandex.
<b>YouTube Education Filter</b>	Select to enable the YouTube educational filter and enter your filter code. The filter blocks non-educational content as per your YouTube filter code.

See <http://support.google.com/youtube/bin/answer.py?hl=en&answer=2592715> for more information on YouTube for schools and the education filter.

## View profile violations

To view profile violations, select *Violations (in the Last 7 Days)* in the FortiClient console.

**Figure 72:** Traffic violations

Website	Category	Time	User
ffupdate.conduit-services.com	Malicious Websites	25/10/2012 9:53:37 AM	dshearman

# Application Firewall

FortiClient v5.0 can recognize the traffic generated by a large number of applications. You can create rules to block or allow this traffic per category, or application.



In FortiClient v5.0 Patch Release 4 or later this feature is disabled by default and the tab is hidden for standalone clients. For users who are registered to a FortiGate using endpoint control, the FortiGate administrator may choose to enable this feature.

---

In FortiClient v5.0 Patch Release 4 or later, the application firewall feature is enabled in the FortiGate endpoint profile. The profile includes application firewall configuration.

The FortiClient Endpoint Control feature enables the site administrator to distribute an Application Control sensor from a FortiGate device. The overall process is as follows:

- Create an Application Sensor and Application Filter on the FortiGate
- Add the Application Sensor to the Endpoint profile on the FortiGate

## **Step 1: Create a custom Application Control Sensor**

1. Login to your FortiGate.
2. In the left tree menu, select *Security Profiles > Application Control > Application Sensors*.
3. To create a new sensor, click the *Create New* icon (a plus “+” symbol in the upper-right corner).
4. Enter a name for the sensor.
5. Select *OK* to save the sensor.
6. Select *Create New* in the *Edit Application Sensor* toolbar.

The *New Application Filter* page opens.

**Figure 73:**New application filter page

**New Application Filter**

Sensor Type: ☒ Filter Based ☐ Specify Applications

Filter Options: ☒ Basic ☐ Advanced [\[Hide Filter\]](#)

Category	Popularity	Technology	Risk
<input type="checkbox"/> Botnet	<input checked="" type="checkbox"/> Popularity	<input checked="" type="checkbox"/> Technology	<input checked="" type="checkbox"/> Risk
<input checked="" type="checkbox"/> File.Sharing	<input checked="" type="checkbox"/> Popularity	<input checked="" type="checkbox"/> Browser-Based	<input checked="" type="checkbox"/> Botnet
<input checked="" type="checkbox"/> IM	<input checked="" type="checkbox"/> Popularity	<input checked="" type="checkbox"/> Client-Server	<input checked="" type="checkbox"/> Excessive-Bandwidth
<input type="checkbox"/> Proxy	<input checked="" type="checkbox"/> Popularity	<input checked="" type="checkbox"/> Network-Protocol	<input checked="" type="checkbox"/> None
<input type="checkbox"/> Storage.Backup	<input checked="" type="checkbox"/> Popularity	<input checked="" type="checkbox"/> Peer-to-Peer	
<input type="checkbox"/> VoIP			
<input type="checkbox"/> Industrial			
<input type="checkbox"/> Special			
<input type="checkbox"/> Web.Others			

Application Name	Category	Technology	Popularity	Risk
Ozz0	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
2Safe	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
2Safe_Download	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
2Safe_Upload	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
2shared_Download.File	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
2shared_Upload.File	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
4Sync	File.Sharing	Client-Server	☆☆☆☆☆	Excessive-Bandwidth
4Sync_Upload	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
4shared	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
4shared_Download	File.Sharing	Network-Protocol, Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
4shared_Upload	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth
9PTV	P2P	Peer-to-Peer	☆☆☆☆☆	Excessive-Bandwidth
24im	IM	Client-Server	☆☆☆☆☆	Excessive-Bandwidth
51.Com_Webdisk	File.Sharing	Browser-Based	☆☆☆☆☆	Excessive-Bandwidth

1 / 49 [ Total: 685 ]

Action:  Monitor  Block  Reset  Traffic Shaping

OK  Cancel

7. In the *Sensor Type* field, select either *Filter Based* or *Specific Applications*.
8. Filter options are available when the *Sensor Type* is *Filter Based*.
9. In the *Category* section, uncheck the check boxes to deselect application categories.
10. In the *Action* section, select *Block*.



When selecting Monitor or Traffic Shaping, FortiClient will allow the applications selected. When selecting Block or Reset, FortiClient will block the applications selected.

11. Select *OK* to save the profile.

## Step 2: Add the Application Control Sensor to the Endpoint Profile

1. In the left tree menu, select *User & Device > Device > Endpoint Profile*.
2. In the right pane, in the *Edit Endpoint Profile* page, in the *FortiClient Configuration Deployment* section, toggle the *Application Firewall* button to *ON*.

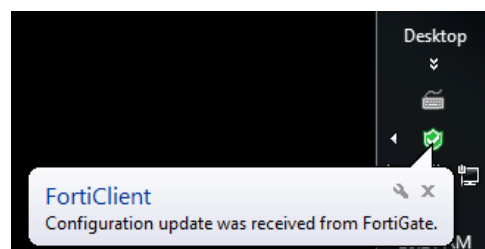
**Figure 74:**Edit endpoint profile page

The screenshot shows the 'Edit Endpoint Profile' interface. At the top, the profile name is 'default'. Under 'FortiClient Configuration Deployment', the 'Windows and Mac' section has several options: 'AntiVirus Realtime Protection on Client' (ON), 'Application Firewall' (ON, set to 'default'), 'Web Category Filtering' (ON, set to 'default'), 'Endpoint Vulnerability Scan on Client' (ON), and 'Client VPN Provisioning' (ON). The 'Advanced Options' section is also ON, with checkboxes for 'AntiVirus', 'WebFilter', 'Application Firewall', 'VPN', 'Vulnerability Scan', and 'Banner'. The 'Apply' button is at the bottom.

3. Select the Application Sensor in the drop-down list.
4. Toggle the *Advanced Options* button to *ON* and select the checkbox for *Application Firewall*.
5. Select *Apply* to save the profile.

The FortiGate will send the Endpoint Profile configuration update to registered clients.

**Figure 75:**Configuration update received by FortiClient



The Application Control module is now available in FortiClient.



**Figure 76:**Application firewall module



## View applications blocked

To view blocked applications, select *Applications Blocked* in the FortiClient console. This page lists all applications blocked in the past seven days, including the count and time of last occurrence.

# IPsec VPN and SSL VPN

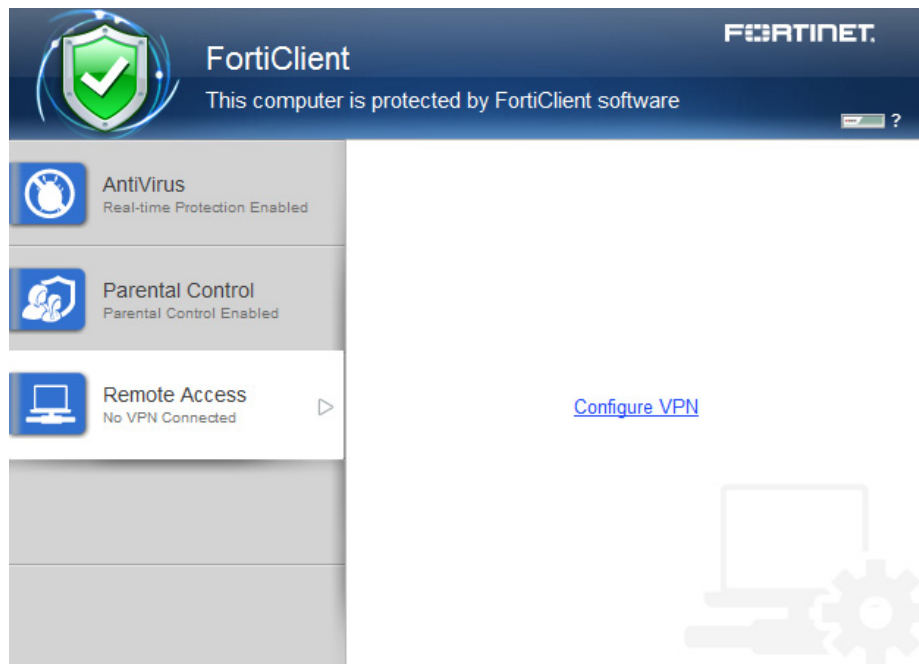
FortiClient v5.0 supports both IPsec and SSL VPN connections to your network for remote access. You can provision client VPN connections in the Endpoint Profile or configure new connections in the FortiClient console.

This section describes how to configure remote access.

## Add a new connection

Select *Configure VPN* in the FortiClient console to add a new VPN configuration.

**Figure 77:**Configure a new VPN connection



### Provision a client VPN in the Endpoint Profile:

1. Login to your FortiGate device.
2. In the left tree menu, select *User & Device > Device > Endpoint Profile*.
3. In the right pane, in the *Edit Endpoint Profile* page, in the *FortiClient Configuration Deployment* section, toggle the *Client VPN Provisioning* button to ON.
4. Enter a name for the VPN connection.
5. Select the VPN type. Select either *IPsec VPN* or *SSL-VPN*.
6. Configure the remote gateway and authentication settings for the type of VPN selected.

**Figure 78:**Edit endpoint profile page

The screenshot shows the 'Edit Endpoint Profile' interface in FortiGate. The profile name is 'default'. Under the 'FortiClient Configuration Deployment' section, the 'Windows and Mac' tab is active. The 'Client VPN Provisioning' toggle is turned 'ON'. Below it, the VPN configuration is shown: 'Type' is 'IPsec VPN', 'Authentication Method' is 'Preshared Key', and a preshared key is entered. The 'Advanced Options' section is also expanded, showing a dashboard with 'VPN' checked. The 'iOS' and 'Android' sections show 'Client VPN Provisioning' is turned 'OFF'. An 'Apply' button is at the bottom right.

7. Toggle the *Advanced Options* button to *ON* and select the checkbox for *VPN*.
8. Select *Apply* to save the profile.

The FortiGate will send the Endpoint Profile configuration update to registered clients.

**Figure 79:**Configuration update received by FortiClient

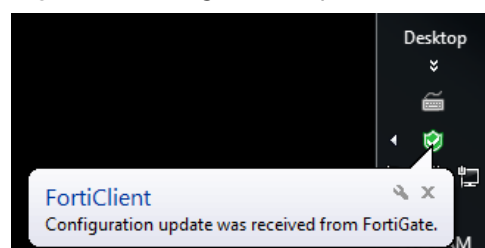
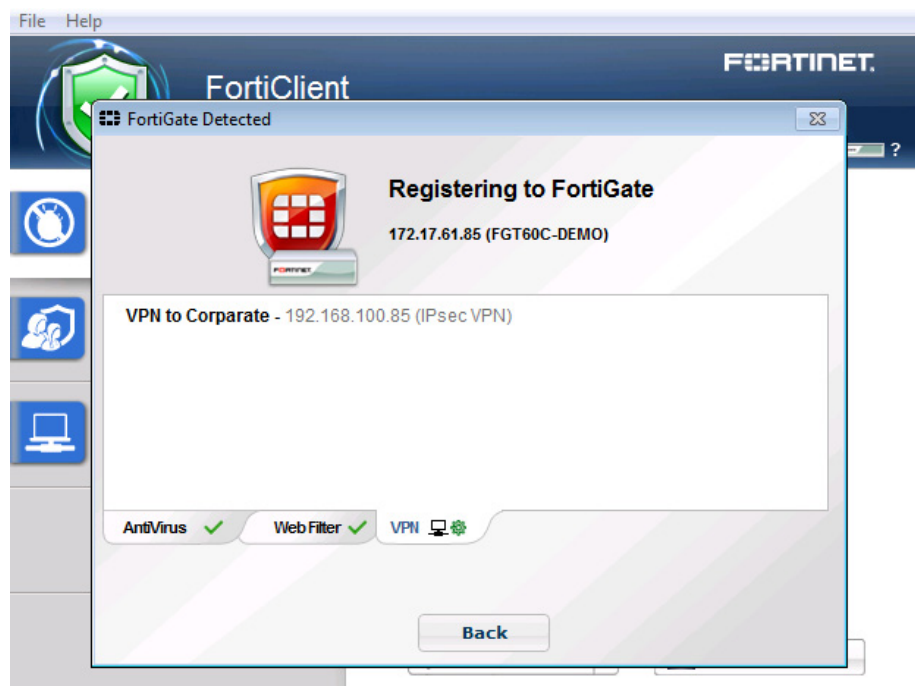


Figure 80 illustrates VPN settings received by the FortiGate endpoint control profile. When registered to a FortiGate, VPN settings are enabled and configured in the FortiGate endpoint profile.

**Figure 80:**VPN settings in the endpoint control profile



## Create a new SSL VPN connection

To create a new SSL VPN connection, select *Configure VPN* or use the drop-down menu in the FortiClient console. In this menu you can configure options outlined in the following figure and table.

**Figure 81:**SSL VPN configuration options

The image shows the 'Create new VPN Connection' dialog box. It contains the following fields and options:

- Connection Name: ssl\_90\_1
- Type: ☒ SSL-VPN ☐ IPsec VPN
- Description: (empty text box)
- Remote Gateway: 10.10.90.1;ssldemo.fortinet.com
- ☒ Customize port: 443
- Authentication: ☐ Prompt on login ☒ Save login
- Username: test
- Client Certificate: ☒
- Certificate: [Prompt on connect] (dropdown menu)
- Do not Warn Invalid Server Certificate: ☒

At the bottom are 'OK' and 'Cancel' buttons.

Configure the following settings:

<b>Connection Name</b>	Enter a name for the connection.
<b>Type</b>	Select SSL VPN.
<b>Description</b>	Enter a description for the connection. (optional)
<b>Remote Gateway</b>	Enter the IP address/hostname of the remote gateway. Multiple remote gateways can be configured by separating each entry with a semicolon. If one gateway is not available, the VPN will connect to the next configured gateway.
<b>Port</b>	Select to change the port. The default port is 443.
<b>Authentication</b>	Select to prompt on login, or save login.
<b>Username</b>	If you selected to save login, enter the username in the dialog box.
<b>Client Certificate</b>	Select to enable client certificates.
<b>Certificate</b>	Select the certificate option in the drop-down menu.
<b>Do not warn Invalid Server Certificate</b>	Select if you do not want to be warned if the server presents an invalid certificate.

## Create a new IPsec VPN connection

To create a new IPsec VPN connection, select *Configure VPN* or use the drop-down menu in the FortiClient console. In this menu you can configure options outlined in the following figure and table.

**Figure 82:**IPsec VPN configuration options

The screenshot shows the 'Create new VPN Connection' dialog box. The fields are as follows:

- Connection Name: psk\_90\_1
- Type: ☐ SSL-VPN, ☒ IPsec VPN
- Description: (empty)
- Remote Gateway: 10.10.90.1;ipsecdemo.fortinet.com
- Authentication Method: Pre-Shared Key (dropdown)
- Pre-Shared Key: (masked with dots)
- Authentication (XAuth): ☐ Prompt on login, ☒ Save login
- Username: test

Buttons: OK, Cancel

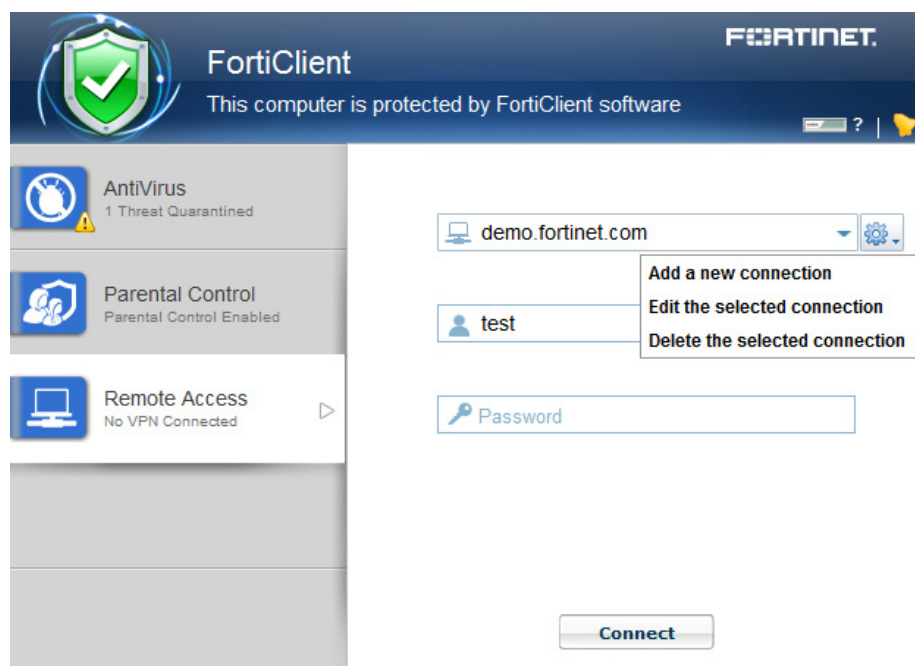
Configure the following settings:

<b>Connection Name</b>	Enter a name for the connection.
<b>Type</b>	Select IPsec VPN.
<b>Description</b>	Enter a description for the connection. (optional)
<b>Remote Gateway</b>	Enter the IP address/hostname of the remote gateway. Multiple remote gateways can be configured by separating each entry with a semicolon. If one gateway is not available, the VPN will connect to the next configured gateway.
<b>Authentication Method</b>	Select either <i>X.509 Certificate</i> or <i>Pre-shared Key</i> in the drop-down menu.
<b>X.509 Certificate, Pre-shared Key</b>	Select <i>X.509 Certificate</i> in the drop-down menu, or enter the pre-shared key in the dialog box. See <a href="#">Certificate management</a> for information on configuring certificate options.
<b>Authentication (XAuth)</b>	Select to prompt on login, save login, or disable.
<b>Username</b>	If you selected save login, enter the username in the dialog box.

## Connect to a VPN

To connect to a VPN, select the name of the VPN from the drop-down menu. Enter your username, password, and select the *Connect* button.

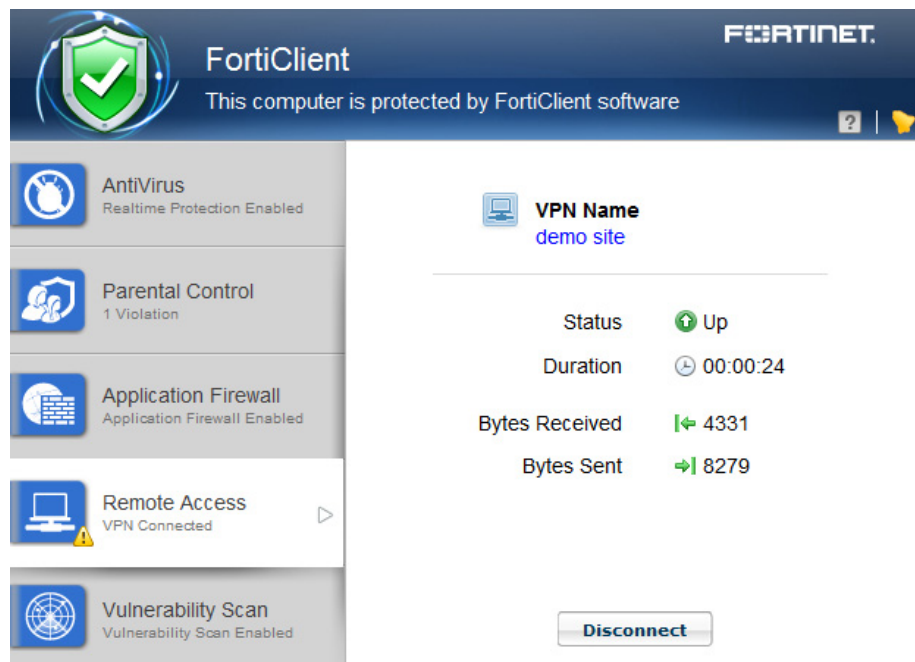
**Figure 83:**Connection options



You can also select to edit an existing VPN connection and delete an existing VPN connection using the drop-down menu.

When connected, the console will display the connection status, duration, and other relevant information. You can now browse your remote network. Select the *Disconnect* button when you are ready to terminate the VPN session.

**Figure 84:**SSL VPN connection established



This page displays the following:

Name of the VPN connection	
<b>Status</b>	The status of the VPN connection.
<b>Duration</b>	The duration of the VPN connection.
<b>Bytes Received</b>	Bytes received through the VPN connection.
<b>Bytes Sent</b>	Bytes sent through the VPN connection.
<b>Disconnect</b>	Select to disconnect the VPN connection.

## Save Password, Auto Connect, and Always Up (Keep Alive)

When configuring a FortiClient VPN (IPsec) or SSL VPN connection on your FortiGate device, you can select to enable the following features:

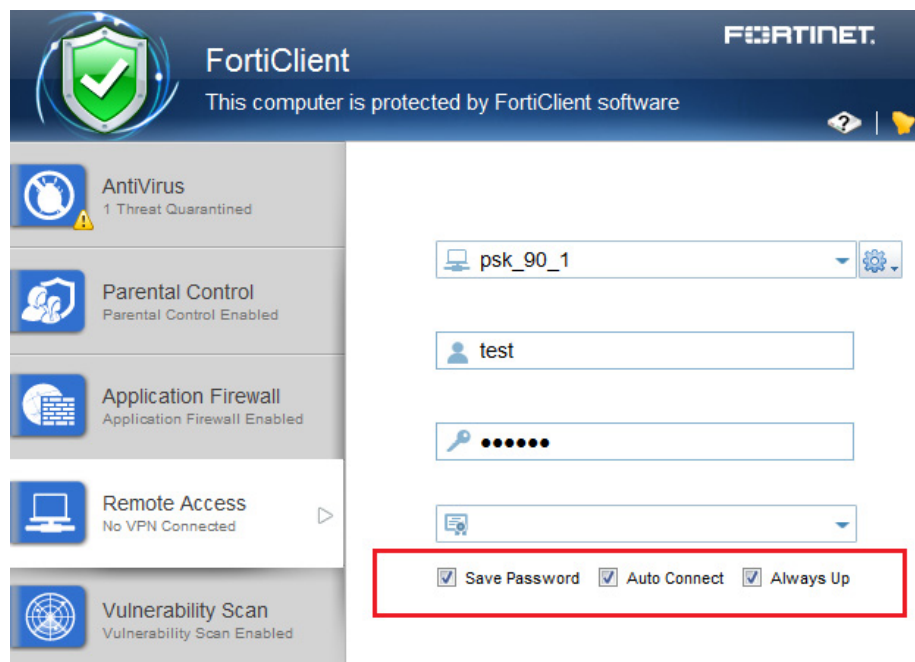
- *Save Password*: Allows the user to save the VPN connection password in the console.
- *Auto Connect*: When FortiClient is launched, the VPN connection will automatically connect.
- *Always Up (Keep Alive)*: When selected, the VPN connection is always up even when no data is being processed. If the connection fails, keep alive packets sent to the FortiGate will sense when the VPN connection is available and re-connect.



For SSL VPN tunnel mode configurations these features are enabled/disabled in the *SSL VPN Portal*.

When enabled in the FortiGate configuration, once the FortiClient is connected to the FortiGate, the client will receive these configuration options.

**Figure 85:**IPsec VPN console with features enabled



For FortiClient VPN configurations, once these features are enabled they may only be edited from the command line. Use the following commands to disable these features:

```
config vpn ipsec phase1-interface
  edit [vpn name]
    set save-password disable
    set client-auto-negotiate disable
    set client-keep-alive disable
  end
end
```



## FortiToken and FortiClient VPN

You can use FortiToken with FortiClient for two-factor authentication. See the [FortiOS 5.0 Handbook](#) for information on configuring FortiToken, user groups, VPN, and two-factor authentication on your FortiGate device for FortiClient VPN connections.

**Figure 86:**FortiToken authentication



## Advanced features (Microsoft Windows)

### Connect VPN before logon (AD environments)

The VPN `<options>` tag holds global information controlling VPN states. The VPN will connect first, then logon to AD/Domain.

```
<forticlient_configuration>
  <vpn>
    <options>
      <show_vpn_before_logon>1</show_vpn_before_logon>
      <use_windows_credentials>1</use_windows_credentials>
    </options>
  </vpn>
</forticlient_configuration>
```

### Create a redundant IPsec VPN

To use VPN resiliency/redundancy, you will configure a list of FortiGate IP/FQDN servers, instead of just one:

```
<forticlient_configuration>
  <vpn>
    <ipsecvpn>
      <options>
        ...
      </options>
      <connections>
        <connection>
          <name>psk_90_1</name>
          <type>manual</type>
          <ike_settings>
            <prompt_certificate>0</prompt_certificate>
            <server>10.10.90.1;ipsecdemo.fortinet.com;172.17.61
              .143</server>
            <redundantsortmethod>1</redundantsortmethod>
            ...
          </ike_settings>
        </connection>
      </connections>
    </ipsecvpn>
  </vpn>
</forticlient_configuration>
```

This is a balanced, but incomplete XML configuration fragment. All closing tags are included, but some important elements to complete the IPsec VPN configuration are omitted.

#### RedundantSortMethod = 1

This XML tag sets the IPsec VPN connection as ping-response based. The VPN will connect to the FortiGate which responds the fastest.

## RedundantSortMethod = 0

By default, RedundantSortMethod =0 and the IPsec VPN connection is priority based. Priority based configurations will try to connect to the FortiGate starting with the first in the list.

## Priority based SSL VPN connections

SSL VPN supports priority based configurations for redundancy.

```
<forticlient_configuration>
  <vpn>
    <sslvpn>
      <options>
        <enabled>1</enabled>
        ...
      </options>
      <connections>
        <connection>
          <name>ssl_90_1</name>
          <server>10.10.90.1;ssldemo.fortinet.com;172.17.61.143:44
            3</server>
          ...
        </connection>
      </connections>
    </sslvpn>
  </vpn>
</forticlient_configuration>
```

This is a balanced, but incomplete XML configuration fragment. All closing tags are included, but some important elements to complete the SSL VPN configuration are omitted.

For SSL VPN, all FortiGates must use the same TCP port.

## Advanced features (Mac OS X)

### Create a redundant IPsec VPN

To use VPN resiliency/redundancy, you will configure a list of FortiGate IP/FQDN servers, instead of just one:

```
<forticlient_configuration>
  <vpn>
    <ipsecvpn>
      <options>
        ...
      </options>
      <connections>
        <connection>
          <name>psk_90_1</name>
          <type>manual</type>
          <ike_settings>
            <prompt_certificate>0</prompt_certificate>
            <server>10.10.90.1;ipsecdemo.fortinet.com;172.17.61
              .143</server>
            <redundantsortmethod>1</redundantsortmethod>
            ...
          </ike_settings>
        </connection>
      </connections>
    </ipsecvpn>
  </vpn>
</forticlient_configuration>
```

This is a balanced, but incomplete XML configuration fragment. All closing tags are included, but some important elements to complete the IPsec VPN configuration are omitted.

#### RedundantSortMethod = 1

This XML tag sets the IPsec VPN connection as ping-response based. The VPN will connect to the FortiGate which responds the fastest.

#### RedundantSortMethod = 0

By default, RedundantSortMethod = 0 and the IPsec VPN connection is priority based. Priority based configurations will try to connect to the FortiGate starting with the first in the list.

## Priority based SSL VPN connections

SSL VPN supports priority based configurations for redundancy.

```
<forticlient_configuration>
  <vpn>
    <sslvpn>
      <options>
        <enabled>1</enabled>
        ...
      </options>
      <connections>
        <connection>
          <name>ssl_90_1</name>
          <server>10.10.90.1;ssldemo.fortinet.com;172.17.61.143:44
            3</server>
          ...
        </connection>
      </connections>
    </sslvpn>
  </vpn>
</forticlient_configuration>
```

This is a balanced, but incomplete XML configuration fragment. All closing tags are included, but some important elements to complete the SSL VPN configuration are omitted.

For SSL VPN, all FortiGates must use the same TCP port.



VPN before logon is currently not supported in FortiClient v5.0 Patch Release 2 (Mac OS X).

---

## VPN tunnel & script (Microsoft Windows)

### Feature overview

This feature supports auto running a user-defined script after the configured VPN tunnel is connected or disconnected. The scripts are batch scripts in Windows and shell scripts in Mac OS X. They are defined as part of a VPN tunnel configuration on FortiGate's XML format Endpoint Profile. The profile will be pushed down to FortiClient from FortiGate. When FortiClient's VPN tunnel is connected or disconnected, the respective script defined under that tunnel will be executed.

### Map a network drive after tunnel connection

The script will map a network drive and copy some files after the tunnel is connected.

```
<on_connect>
  <script>
    <os>windows</os>
    <script>
      <![CDATA[
net use x: \\192.168.10.3\ftpshare /user:Honey Boo Boo
md c:\test
copy x:\PDF\*. * c:\test
      ]]>
    </script>
  </script>
</on_connect>
```

### Delete a network drive after tunnel is disconnected

The script will delete the network drive after the tunnel is disconnected.

```
<on_disconnect>
  <script>
    <os>windows</os>
    <script>
      <![CDATA[
net use x: /DELETE
      ]]>
    </script>
  </script>
</on_disconnect>
```

## VPN tunnel & script (Mac OS X)

### Map a network drive after tunnel connection

The script will map a network drive and copy some files after the tunnel is connected.

```
<on_connect>
<script>
  <os>mac</os>
  <script>
    /bin/mkdir /Volumes/installers
    /sbin/ping -c 4 192.168.1.147 >
      /Users/admin/Desktop/dropbox/p.txt
    /sbin/mount -t smbfs
      //kimberly:RigUpTown@ssldemo.fortinet.com/installer
      s /Volumes/installers/ >
      /Users/admin/Desktop/dropbox/m.txt
    /bin/mkdir /Users/admin/Desktop/dropbox/dir
    /bin/cp /Volumes/installers/*.log
      /Users/admin/Desktop/dropbox/dir/.
  </script>
</script>
</on_connect>
```

### Delete a network drive after tunnel is disconnected

The script will delete the network drive after the tunnel is disconnected.

```
<on_disconnect>
<script>
  <os>mac</os>
  <script>
    /sbin/umount /Volumes/installers
    /bin/rm -fr /Users/admin/Desktop/dropbox/*
  </script>
</script>
</on_disconnect>
```



For more information, see the *FortiClient v5.0 Patch Release 5 XML Reference* at the Fortinet Technical Documentation site, <http://docs.fortinet.com>.

---

# Vulnerability Scan

FortiClient v5.0 includes an *Vulnerability Scan* module to check your personal computer for known system vulnerabilities.



In FortiClient v5.0 Patch Release 4 or later, this feature is disabled by default and the tab is hidden for standalone clients. For users who are registered to a FortiGate using endpoint control, the FortiGate administrator may choose to enable this feature.

---

This section describes how to enable *Vulnerability Scan* in the FortiGate endpoint profile and configuration options.

## **Enable Vulnerability Scan in the Endpoint Profile:**

1. Login to your FortiGate device.
2. In the left tree menu, select *User & Device > Device > Endpoint Profile*.
3. In the right pane, in the *Edit Endpoint Profile* page, in the *FortiClient Configuration Deployment* section, toggle the *Endpoint Vulnerability Scan on Client* button to *ON*.
4. Select the schedule scan type. Select one of: *Daily*, *Weekly*, or *Monthly*.
5. Select the checkbox to *Initiate Scan After Client Registration*.



**Figure 87:**Edit endpoint profile page

Profile Name: default

Comments: Write a comment... 0/255

### FortiClient Configuration Deployment

#### Windows and Mac

- ☒ AntiVirus Realtime Protection on Client
- ☒ Application Firewall: default
- ☒ Web Category Filtering: default
- ☐ Disable Web Category Filtering when protected by this FortiGate
- ☒ Endpoint Vulnerability Scan on Client
  - Schedule Scan Type: ☐ Daily ☐ Weekly ☒ Monthly
  - ☒ Initiate Scan After Client Registration
- ☒ Client VPN Provisioning
  - VPN Name:
  - Type: ☒ IPsec VPN ☐ SSL-VPN
  - Remote Gateway:
  - Authentication Method: Preshared Key
  - Preshared Key:
- ☐ Upload Logs to FortiAnalyzer/FortiManager
- ☐ Use FortiManager for client software/signature update
- ☒ Advanced Options
  - Dashboard:
    - ☒ AntiVirus ☒ WebFilter ☒ Application Firewall
    - ☒ VPN ☒ Vulnerability Scan ☐ Banner
  - Registration Dialog:
    - ☒ Profile Details

#### iOS

- ☐ Web Category Filtering: New Profile
- ☐ Client VPN Provisioning
- ☐ Distribute Configuration Profile (.mobileconfig file)

#### Android

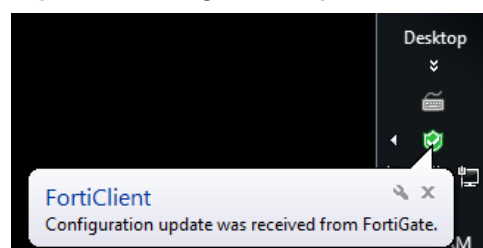
- ☐ Web Category Filtering: New Profile
- ☐ Client VPN Provisioning

Apply

6. Toggle the *Advanced Options* button to ON and select the checkbox for *Vulnerability Scan*.
7. Select *Apply* to save the profile.

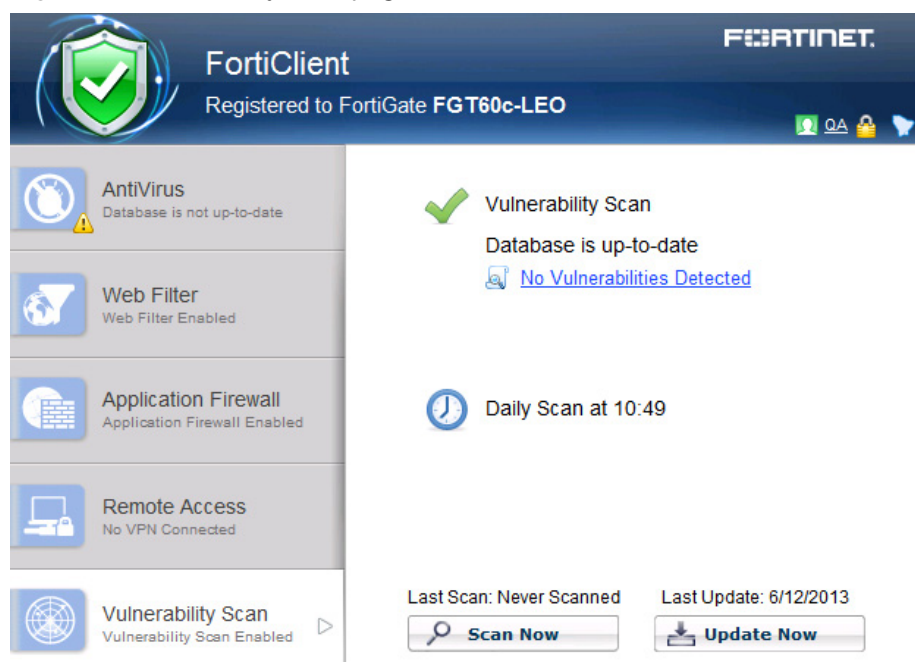
The FortiGate will send the Endpoint Profile configuration update to registered clients.

**Figure 88:**Configuration update was received from FortiGate



The Vulnerability Scan module is now available in FortiClient.

**Figure 89:** Vulnerability scan page



## Scan now

To perform a vulnerability scan, select the *Scan Now* button in the FortiClient console. FortiClient will scan your personal computer for known vulnerabilities. The console displays the date of the last scan above the button.

## Update now

Select the *Update Now* button in the FortiClient console to update the vulnerability signature.



You can select to use a FortiManager device for client software and signature updates. When configuring the endpoint profile, select *Use FortiManager for client software/signature updates* to enable the feature and enter the IP address of your FortiManager device.

## View vulnerabilities

When the scan is complete, FortiClient will display the number of vulnerabilities found in the FortiClient console. Select the *Found* link to view a list of vulnerabilities detected on your system.

**Table 5:** Vulnerabilities detected page

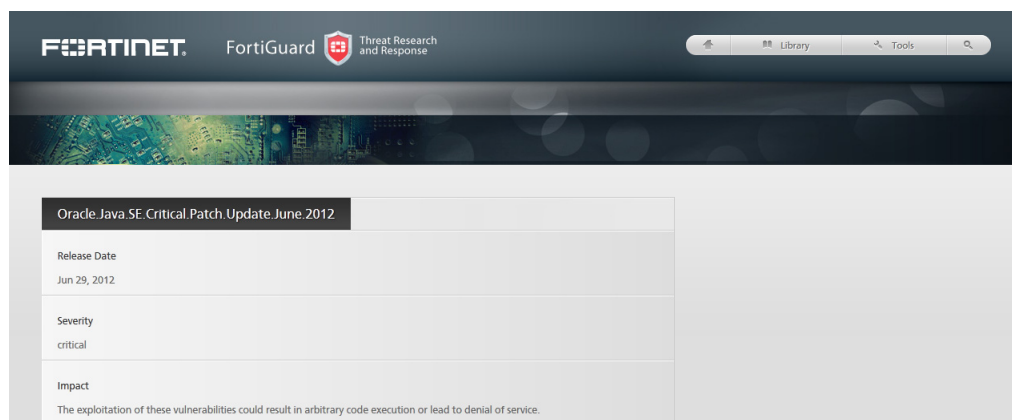
Vulnerabilities Detected in the Last 30 Days			
Vulnerability Name	Severity	Details	Time
Most Recent Scan			
1 Adobe.Flash.Player.and.AIR.Multiple.Vulnerabilities.APSB12-24	Critical	33877	24/12/2012 2:35:21 PM
2 MS.VS.Active.Template.Library.Remote.Code.Execution	Critical	20531	24/12/2012 2:35:21 PM
3 Oracle.Java.SE.Critical.Patch.Update.October.2012	Critical	33716	24/12/2012 2:35:21 PM
4 Oracle.Java.SE.Critical.Patch.Update.Advisory.February.2012	Critical	32669	24/12/2012 2:35:21 PM
5 Oracle.Java.SE.Critical.Patch.Update.February.2011	Critical	27928	24/12/2012 2:35:21 PM
6 Oracle.Java.SE.Critical.Patch.Update.June.2011	Critical	30899	24/12/2012 2:35:21 PM
7 Oracle.Java.Runtime.True.Type.Font.IDEF.OpCode.Buffer.Ove...	Critical	31444	24/12/2012 2:35:21 PM
8 Oracle.Java.Runtime.Environment.Memory.Corruption.Vulnera...	Critical	33599	24/12/2012 2:35:21 PM
9 Oracle.Java.MixerSequence.Array.Index.Remote.Code.Execut...	Critical	30551	24/12/2012 2:35:21 PM
10 Oracle.Java.FileDialog.Show.Buffer.Overflow	Critical	28761	24/12/2012 2:35:21 PM
11 Oracle.Java.SE.Critical.Patch.Update.June.2012	Critical	32430	24/12/2012 2:35:21 PM
12 Microsoft.XML.Core.Services.Remote.Code.Execution.Vulner...	Critical	32958	24/12/2012 2:35:21 PM
13 MS.Windows.Unauthorized.Digital.Certificates.Spoofing.KB2...	Critical	32685	24/12/2012 2:35:21 PM
14 Apple.Safari.Multiple.Vulnerabilities.APPLE-SA-2012-11-01-2	Critical	33927	24/12/2012 2:35:21 PM
15 Adobe.Flash.Player.and.AIR.Multiple.Vulnerabilities.APSB12-14	Critical	32255	24/12/2012 2:35:21 PM
16 Adobe.Flash.Player.and.AIR.Multiple.Vulnerabilities.APSB12-19	Critical	33028	24/12/2012 2:35:21 PM
17 Adobe.Flash.Player.and.AIR.Multiple.Vulnerabilities.APSB12-22	Critical	33582	24/12/2012 2:35:21 PM
Close			

This page displays the following:

<b>Vulnerability Name</b>	The name of the vulnerability
<b>Severity</b>	The severity level assigned to the vulnerability; Critical, High, Medium, Low, Info.
<b>Details</b>	FortiClient vulnerability scan lists a Bugtraq (BID) number under the details column. You can select the BID to view details of the vulnerability on the FortiGuard site, or search the web using this BID number.
<b>Time</b>	The date and time that the vulnerability was detected.
<b>Close</b>	Close the window and return to the FortiClient console.
<b>Clear</b>	Clear the Vulnerability Scan results.

Select the *Details* ID number from the list to view information on the selected vulnerability on the FortiGuard site. The site details the release date, severity, impact, description, affected products, and recommended actions.

**Figure 90:** FortiGuard site details



## Vulnerability scan logging

To configure Vulnerability Scan logging, select *File* in the toolbar, and select *Settings* in the drop-down menu. Select *Logging* to view the drop-down menu. Select *Vulnerability Scan* in the logging menu to enable logging for this module.



Vulnerability scan logging is disabled while you are registered to a FortiGate.

# Settings

This sections describe the available option in the settings menu.



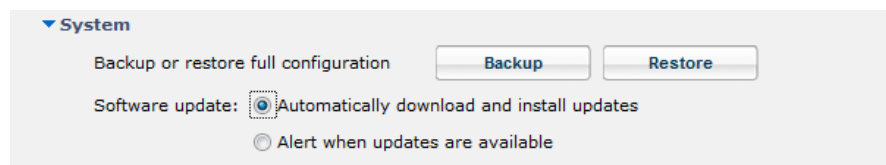
For registered clients, the following controls on the settings page are available:

- Backup
- Export logs

## Backup or restore full configuration

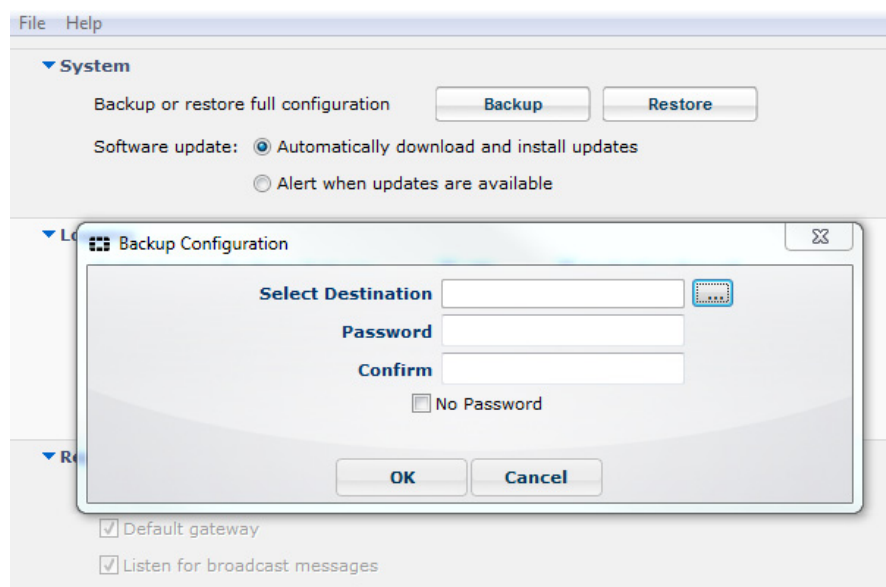
To backup or restore the full configuration file select *File* in the toolbar and select *Settings* in the drop-down menu. Select *System* to view the drop-down menu. In this menu you can perform a backup or restore a full configuration file.

**Figure 91:**Backup and restore options



When performing a backup you can select the file destination and save the file in an unencrypted or encrypted format.

**Figure 92:**Backup configuration dialog box



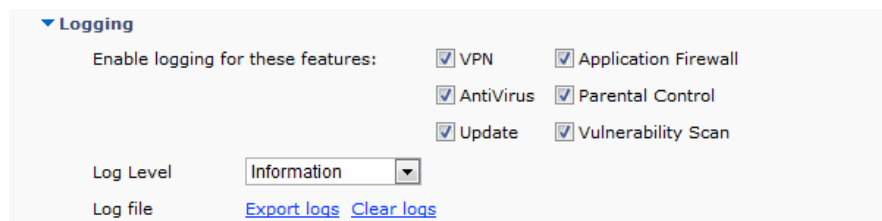
## Logging

To configure logging, select *File* in the toolbar and select *Settings* in the drop-down menu. Select *Logging* to view the drop-down menu. In this menu you can configure logging for the following features:

- VPN
- Antivirus
- Update
- Application Firewall
- Parental Control
- Vulnerability Scan (disabled while registered to a FortiGate)

You can specify the logging level and select to export logs or clear logs.

**Figure 93:**Logging options



The following table lists the logging levels and description:

**Table 6:** FortiClient logging levels

Logging Level	Description
Emergency	The system becomes unstable.
Alert	Immediate action is required.
Critical	Functionality is affected.
Error	An error condition exists and functionality could be affected.
Warning	Functionality could be affected.
Notice	Information about normal events.
Information	General information about system operations.
Debug	Debug FortiClient.

FortiClient can be configured via the endpoint profile to send traffic, vulnerability scan, and event logs to your FortiAnalyzer or FortiManager device running v5.0 Patch Release 2 or later.

## Configure logging to FortiAnalyzer or FortiManager

To configure FortiClient to log to your FortiAnalyzer or FortiManager you require the following:

- FortiClient v5.0 Patch Release 2 or later
- A FortiGate device running FortiOS v5.0 Patch Release 2 or later
- A FortiAnalyzer or FortiManager device running v5.0 Patch Release 2 or later

The registered FortiClient device will send traffic logs, vulnerability scan logs, and event logs to the log device on port 514 TCP.

### Enable logging on the FortiGate device:

1. On your FortiGate device, select *Log & Report > Log Config > Log Settings*.
2. The *Log Settings* window opens.

**Figure 94:**Log settings window

**Log Settings**

**Logging and Archiving**

☒ Send Logs to FortiAnalyzer/FortiManager  
IP Address: 172.16.78.35

Upload Option  
☒ Realtime  
☐ Encrypt Log Transmission

☐ Send Logs to FortiCloud  
Account: @fortinet.com

☒ Event Logging  
☒ Enable All  
☒ WiFi activity event ☒ System activity event ☒ User activity event  
☒ Router activity event ☒ VPN activity event ☒ Explicit web proxy event

**Local Traffic Logging**

☒ Log Allowed Traffic  
☒ Log Local Out Traffic  
☒ Log Denied Traffic

**GUI Preferences**

Display Logs From: FortiAnalyzer  
☒ Resolve Hostnames (Using reverse DNS lookup)  
☒ Resolve Unknown Applications (Using remote application database)

3. Select the *Send Logs to FortiAnalyzer/FortiManager* checkbox to enable this feature. Enter the IP address of your log device. You can select *Test Connectivity* to ensure your FortiGate is able to communicate with the log device on this IP address.
4. Select *Apply* to save the setting.



FortiClient must be able to access the FortiAnalyzer IP address in order to forward logs.

5. Select *User & Device > Device > Endpoint Profile*.

The *Edit Profile* window opens.

**Figure 95:**Edit endpoint profile window

**New Endpoint Profile**

Profile Name

Comments  0/255

Assign Profile To:

Device Groups  +

User Groups  +

Users  +

**FortiClient Configuration Deployment**

**Windows and Mac**

☒ AntiVirus Realtime Protection on Client

☒ Application Firewall

☐ Web Category Filtering

☒ Endpoint Vulnerability Scan on Client

Schedule Scan Type: ☐ Daily ☐ Weekly ☒ Monthly

☒ Initiate Scan After Client Registration

☐ Client VPN Provisioning

☐ Upload Logs to FortiAnalyzer/FortiManager

☒ Use FortiManager for client software/signature update

☒ Specify

☒ Failover to FDN when FortiManager is not available

☒ Advanced Options

Dashboard:

☐ AntiVirus ☐ WebFilter ☐ Application Firewall

☐ VPN ☐ Vulnerability Scan ☐ Banner

Registration Dialog:

☒ Profile Details

**iOS**

☐ Web Category Filtering

☐ Client VPN Provisioning

☐ Distribute Configuration Profile (.mobileconfig file)

**Android**

☐ Web Category Filtering

☐ Client VPN Provisioning

- Under *FortiClient Configuration Deployment Windows and Mac*, toggle the *Upload Logs to FortiAnalyzer/FortiManager* feature to ON. You can select either *Same as System* which will follow the FortiGate settings or *Specify* to enter a different IP address. Under *Schedule*, select to upload logs *Hourly* or *Daily*. Selecting *Change* beside the IP address text box will re-direct you to the [Log settings window](#).
- Select *Apply* to save the setting. Once the endpoint profile change is synchronized with the client, you will start receiving logs from registered clients on your FortiAnalyzer/FortiManager system.

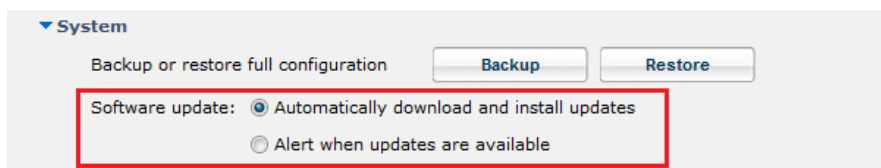
To download the FortiClient log files on the FortiAnalyzer go to the *Log View* tab, select the ADOM, and select the *FortiClient* menu object.



## Updates

To configure updates, select *File* in the toolbar and select *Settings* in the drop-down menu. Select *System* to view the drop-down menu. In this menu you can configure the behavior of FortiClient when a new software version is available on the FortiGuard Distribution Servers (FDS).

**Figure 96:**Update options



You can select to use a FortiManager device for client software and signature updates. When configuring the endpoint profile, select *Use FortiManager for client software/signature updates* to enable the feature and enter the IP address of your FortiManager device.

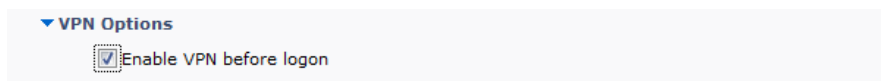
### **To configure FortiClient to use FortiManager for software and signature updates:**

1. On your FortiOS device, select *User & Device > Device > Endpoint Profile*.
2. Toggle the *Use FortiManager for client software/signature update* option to *ON*.
3. Specify the IP address of the FortiManager to use for client software and signature updates.
4. Select the checkbox beside *Failover to FDN when FortiManager is not available* to have FortiClient receive updates from the FortiGuard Distribution Network when the FortiManager is not available to ensure your clients are always protected.
5. Select *Apply* to save the setting.

## VPN options

To configure VPN options, select *File* in the toolbar and select *Settings* in the drop-down menu. Select *VPN Options* to view the drop-down menu. In this menu you can configure to enable VPN before login.

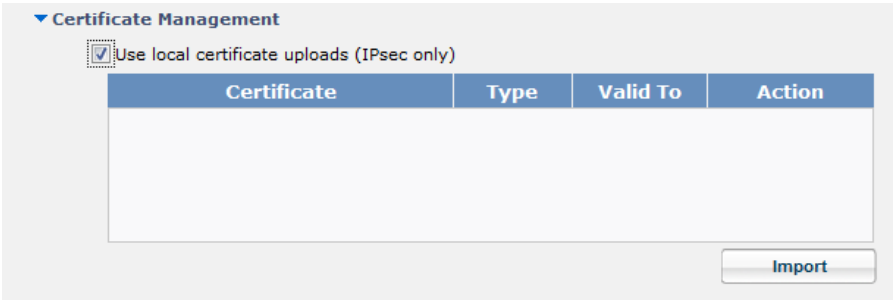
**Figure 97:**VPN options



# Certificate management

To configure VPN certificates, select *File* in the toolbar and select *Settings* in the drop-down menu. Select *Certificate Management* to view the drop-down menu. In this menu you can configure IPsec VPN to use local certificates and import certificates to FortiClient.

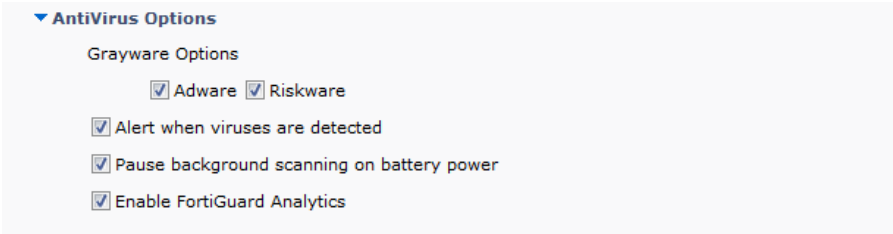
Figure 98:Certificate management options



# Antivirus options

To configure antivirus options, select *File* in the toolbar and select *Settings* in the drop-down menu. Select *AntiVirus Options* to view the drop-down menu. In this menu you can configure grayware options and the behavior of FortiClient when a virus is detected.

Figure 99:Antivirus options



Configure the following settings:

Grayware Options	Grayware is an umbrella term applied to a wide range of malicious applications such as spyware, adware and key loggers that are often secretly installed on a user's computer to track and/or report certain information back to an external source without the user's permission or knowledge.
Adware	Select to enable adware detection and quarantine during the antivirus scan.
Riskware	Select to enable riskware detection and quarantine during the antivirus scan.
Alert when viruses are detected	Select to display notification message window when a virus is detected.

<b>Pause background scanning on battery power</b>	Select to pause background scanning when on battery power.
<b>Enable FortiGuard Analytics</b>	Select to automatically send suspicious files to the FortiGuard Network for analysis.

## Advanced options

To configure advanced options, select *File* in the toolbar, and select *Settings* in the drop-down menu. Select *Advanced* to view the drop-down menu. In this menu you can configure WAN Optimization, Single Sign-On, configuration sync with FortiGate, disable proxy, and the default tab when FortiClient is started.

**Figure 100:**Advanced options

The screenshot shows the 'Advanced' settings window in FortiClient. The 'Advanced' section is expanded, revealing several configuration options:

- Enable WAN Optimization:** A checked checkbox. Below it, 'Maximum Disk Cache Size' is set to 512 MB.
- Enable Single Sign-On mobility agent:** A checked checkbox. Below it, 'Server address' is 172.12.3.14, 'Customize port' is 8001, and 'Pre-Shared Key' is masked with dots.
- Disable configuration sync with FortiGate:** A checked checkbox.
- Disable proxy (troubleshooting only):** A checked checkbox.
- Default tab:** A dropdown menu set to 'Remote Access'.

Configure the following settings:

<b>Advanced</b>	Advanced FortiClient settings.
<b>Enable WAN Optimization</b>	Select to enable WAN Optimization. You should enable only if you have a FortiGate device and your FortiGate is configured for WAN Optimization.
<b>Maximum Disk Cache Size</b>	Select to configure the maximum disk cache size. The default value is 512MB.
<b>Enable Single Sign-On mobility agent</b>	Select to enable Single Sign-On Mobility Agent for FortiAuthenticator. To use this feature you need to apply a FortiClient SSO mobility agent license to your FortiAuthenticator device.
<b>Server address</b>	Enter the FortiAuthenticator IP address.
<b>Customize port</b>	Enter the port number. The default port is 8001.
<b>Pre-Shared Key</b>	Enter the pre-shared key. The pre-shared key should match the key configured on your FortiAuthenticator device.
<b>Disable configuration sync with FortiGate</b>	Select to disable configuration synchronization with FortiGate.

<b>Disable proxy (troubleshooting only)</b>	Select to disable proxy when troubleshooting FortiClient.
<b>Default tab</b>	Select the default tab to be displayed when opening FortiClient.

## Single Sign-On (SSO) mobility agent

The FortiClient Single Sign-On Mobility Agent acts as a client that updates with FortiAuthenticator with user logon and network information.

### FortiClient/FortiAuthenticator protocol

The FortiAuthenticator listens on a configurable TCP port. FortiClient connects to FortiAuthenticator using TLS/SSL with two-way certificate authentication. The FortiClient sends a logon packet to FortiAuthenticator, which replies with an acknowledgement packet.

FortiClient/FortiAuthenticator communication requires the following:

- The IP address should be unique in the entire network.
- The FortiAuthenticator should be accessible from clients in all locations.
- The FortiAuthenticator should be accessible by all FortiGates.



FortiClient Single Sign-On Mobility Agent requires a FortiAuthenticator running v2.0.0 GA build 0006 or later. Enter the FortiAuthenticator (server) IP address, port number, and the pre-shared key configured on the FortiAuthenticator.

#### Enable Single Sign-On mobility agent on FortiClient:

1. Select *File* in the toolbar and select *Settings* in the drop-down menu.
2. Select *Advanced* to view the drop-down menu.
3. Select to *Enable Single Sign-On mobility agent*.
4. Enter the FortiAuthenticator server address and the pre-shared key.

#### Enable FortiClient SSO mobility agent service on the FortiAuthenticator:

1. Select *SSO & Dynamic Policies > SSO > Options*.  
The *Edit FSSO Configuration* page opens.

**Figure 101:**FortiAuthenticator configuration window

**Edit FSSO Configuration**

**FortiGate**

Listening port: 8000

Login expiry (minutes): 480

☒ Enable authentication

Secret key: .....

Log level: Info

**Fortinet Single Sign-On (FSSO)**

☐ Enable Windows Active Directory domain controllers

☐ Enable Radius Accounting SSO clients

☐ Use remote LDAP server for SSO groups lookup

LDAP server: [ Please Select ]

☒ Enable FortiClient SSO Mobility Agent Service

Listening port: 8001

☒ Enable authentication

Secret key: .....

OK

2. Select *Enable FortiClient SSO Mobility Agent Service* and a TCP port value for the listening port.
3. Select *Enable authentication* and enter a secret-key value.
4. Select *OK* to save the setting.

**To enable FortiClient FSSO services on the interface:**

1. Select *System > Network > Interface*.  
The *Edit Network Interface* window opens.

**Figure 102:**Edit network interface window

**Edit Network Interface**

**Interface Status**

Interface: port1

Status: +

**IP Address / Netmask**

IPv4: 172.16.68.48/255.255.255.0

IPv6:

**Access Rights**

Admin access: ☒ Telnet  
☒ SSH  
☒ HTTPS  
☒ HTTP

Services: ☒ RADIUS Auth  
☒ RADIUS Accounting  
☒ LDAP  
☒ LDAPS  
☒ FortiGate FSSO  
☒ OCSP  
☒ FortiClient FSSO

History OK Cancel

2. Select *Edit* to edit the network interface, select *FortiClient FSSO* to enable.

3. Select **OK** to save the setting.

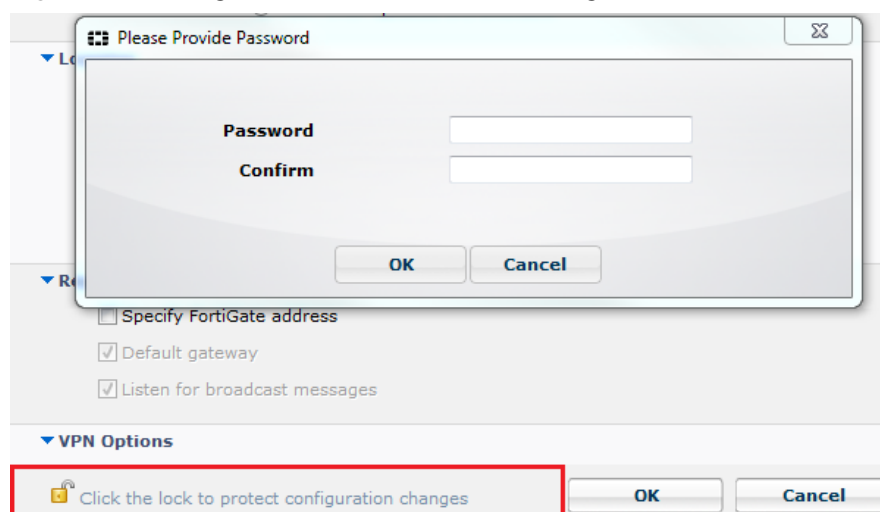


To enable the FortiClient SSO Mobility Agent Service on the FortiAuthenticator, you must first apply the applicable FortiClient license for FortiAuthenticator. For more information, see the [FortiAuthenticator v2.0 Administration Guide](http://docs.fortinet.com) at <http://docs.fortinet.com>. For information on purchasing a FortiClient license for FortiAuthenticator, please contact your authorized Fortinet reseller.

## Configuration lock

To prevent unauthorized changes to the FortiClient configuration, select the lock icon located at the bottom left of the *Settings* page. You will be prompted to enter and confirm a password. When the configuration is locked, configuration changes are restricted and FortiClient cannot be shut down or uninstalled.

**Figure 103:** Configuration lock window and dialog box



When the configuration is locked you can perform the following actions:

- Antivirus
  - Complete an antivirus scan, view threats found, and view logs
  - Select *Update Now* to update signatures
- Parental Control
  - View violations
- Application Firewall
  - View applications blocked
- Remote Access
  - Configure, edit, or delete an IPsec VPN or SSL VPN connection
  - Connect to a VPN connection
- Vulnerability Scan
  - Complete a vulnerability scan of the system
  - View vulnerabilities found
- Register and unregister FortiClient for Endpoint Control

- Settings
  - Export FortiClient logs
  - Backup the FortiClient configuration

To perform configuration changes or to shut down FortiClient, select the lock icon and enter the password used to lock the configuration.

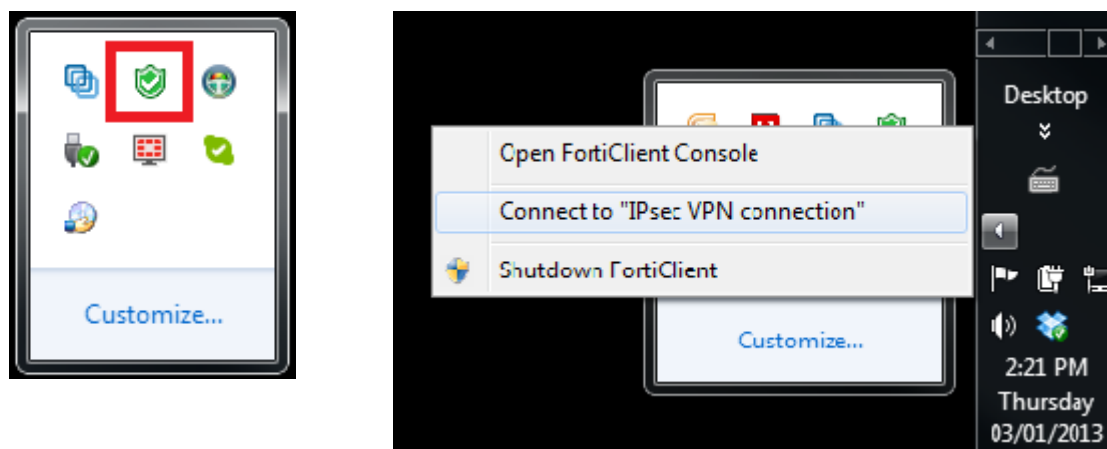
## FortiTray

When FortiClient is running on your system, you can select the FortiTray icon in the Windows system tray to perform various actions. The FortiTray icon is available in the system tray even when the FortiClient console is closed.

- Default menu options
  - Open FortiClient console
  - Shutdown FortiClient
- Dynamic menu options depending on configuration
  - Connect to a configured IPsec VPN or SSL VPN connection
  - Display the antivirus scan window (if a scheduled scan is currently running)
  - Display the Vulnerability scan window (if a vulnerability scan is running)

If you hover the mouse cursor over the FortiTray icon, you will receive various notifications including the version, antivirus signature, and antivirus engine.

**Figure 104:**System tray icon and FortiTray menu

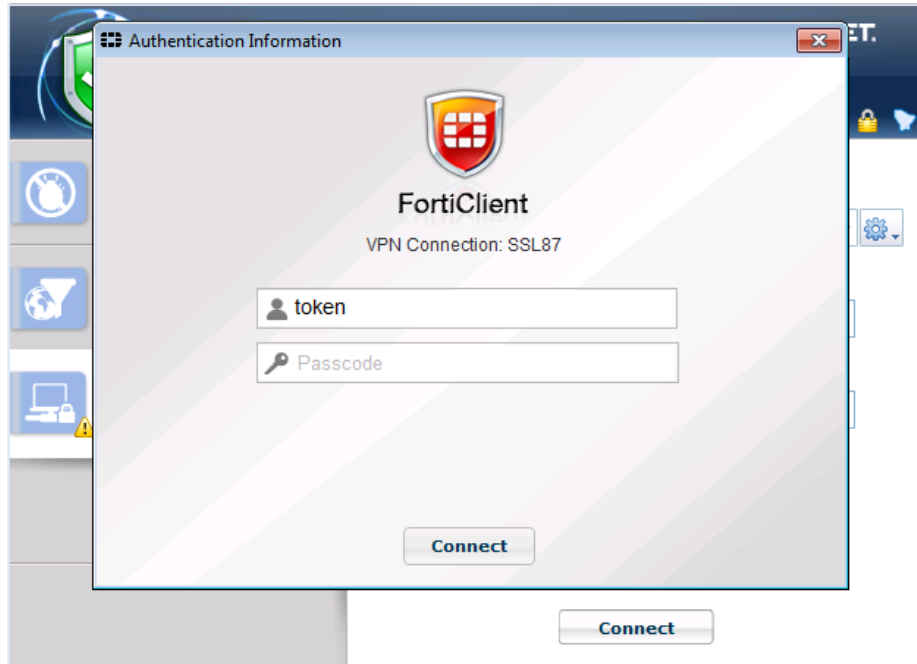


When the configuration is locked, the option to shut down FortiClient from FortiTray is greyed out.

## Connect to a VPN connection

To connect to a VPN connection from FortiTray, select the Windows System Tray and right-click in the FortiTray icon. Select the connection you wish to connect to, enter your username and password in the authentication window, and select **OK** to connect.

**Figure 105:**Authentication window





# Custom FortiClient Installations

The FortiClient Configurator GUI tool is the recommended method of creating a customized installation of FortiClient.



This document was written for FortiClient (Windows) v5.0 Patch Release 5. Not all features described in this document are supported for FortiClient (Mac OS X) v5.0 Patch Release 5.



You can also customize which modules are displayed in the FortiClient dashboard in the Advanced Options section of the Endpoint Profile. This will allow you to activate any of the modules at a later date without needing to re-install FortiClient. Any changes made to the Endpoint Profile are pushed to registered clients.

The FortiClient Configurator GUI tool is included with the FortiClient Tools .zip file in FortiClient v5.0 Patch Release 5 or later. This file is only available on the Customer Service & Support portal and is located in the same file directory as the FortiClient images.

**Figure 106:**FortiClientTools file

**FTP directory /FortiClient/Windows/v5.00/5.0/5.0.5/ at support.fortinet.com**

To view this FTP site in File Explorer: press Alt, click View, and then click Open FTP Site in File Explorer.

[Up to higher level directory](#)

08/07/2013 04:15PM	590,145	<a href="#">FortiClient-v5.0.5-Windows-Release-Notes.pdf</a>
08/07/2013 04:15PM	12,562,144	<a href="#">FortiClientSetup 5.0.5.0308.exe</a>
08/07/2013 04:15PM	10,390,587	<a href="#">FortiClientSetup 5.0.5.0308.zip</a>
08/07/2013 04:15PM	13,725,408	<a href="#">FortiClientSetup 5.0.5.0308 x64.exe</a>
08/07/2013 04:16PM	11,060,511	<a href="#">FortiClientSetup 5.0.5.0308 x64.zip</a>
08/07/2013 04:16PM	26,490,975	<a href="#">FortiClientTools 5.0.5.0308.zip</a>
08/07/2013 04:16PM	2,394	<a href="#">Readme_1st.txt</a>

The Configurator tool requires activation with a license key each time it is used. Ensure that you have completed the following steps prior to logging in to your FortiCare product web portal:

- Purchased FortiClient Registration License
- Activated the FortiClient license on a FortiGate

This video explains how to purchase and apply a FortiClient License:

[http://www.youtube.com/watch?feature=player\\_embedded&v=slkWaUXK0Ok](http://www.youtube.com/watch?feature=player_embedded&v=slkWaUXK0Ok)

This chapter contains the following sections:

- Download the license key
- Activate the configurator tool
- Create a custom installer
- Custom installation packages

## Download the license key

To retrieve your license key:

1. Go to <https://support.fortinet.com> and login to your FortiCare account.
2. Under *Asset Management* select *Manage/View Products*. Select the FortiGate device that has the FortiClient registration license activated.

You will see the *FortiClient Configurator Key File* link in the *License Key* column under the *Registered FortiClient Licenses* heading.

**Figure 107:**FortiClient licenses

### Registered VDOM Licenses

Default. No additional VDOM license registered.

### Registered LENC Licenses

Default. No additional LENC license registered.

### Registered FortiClient Licenses

License Number	License Key
FCT1034712000254	FYD2-P7K7-XIM5-TITY-TM6P-2VN4-4A <a href="#">FortiClient Configurator Activation Key File</a>



### Registered FortiToken Software Licenses

Default. No additional FortiToken Software license registered.

3. Click the link and download license file to your management computer. This file will be needed to each time you use the Configurator tool.

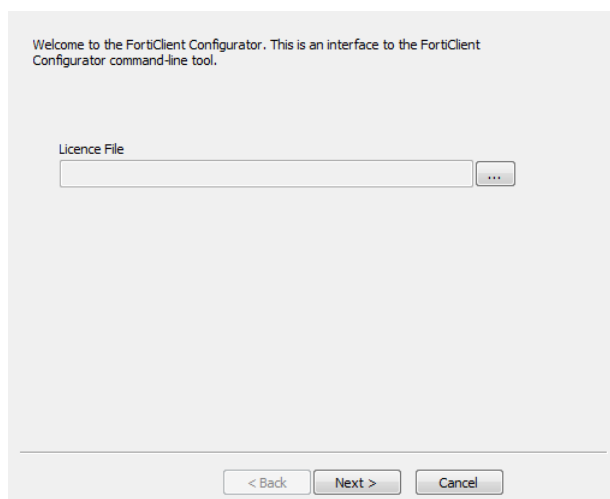
## Activate the configurator tool

**To activate the FortiClient configurator tool:**

1. Unzip the FortiClientTools file, select the FortiClientConfigurator file folder, and double-click the *FortiClientConfiguratorGUI.exe* application file to launch the tool.

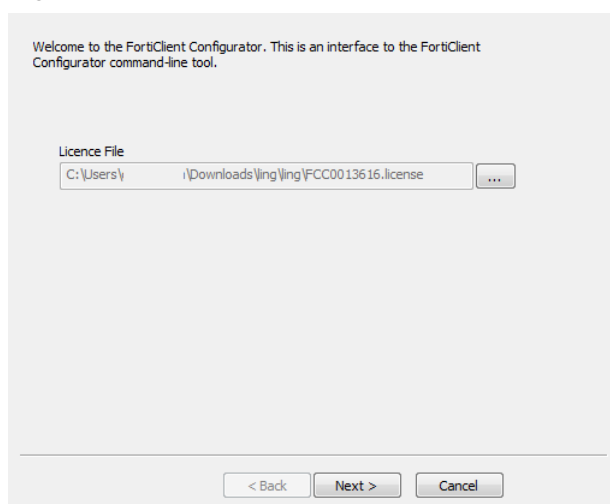
The tool opens at the *Welcome* page.

**Figure 108:**Configurator tool



2. Browse and select the FortiClient Configurator Activation Key file (.license) on your management computer.

**Figure 109:**License file selected



3. Select *Next*.

The tool will now be activated and ready to use.



Since the FortiClient Configurator tool is not installed on the management computer, you must upload the FortiClient Configurator Activation Key file (.license) each time you run the tool.

## Create a custom installer

In FortiClient v5.0 Patch Release 5, two options are available for custom installations:

- A VPN only installer MSI: will only install VPN features (IPSec/SSL), either with or without preconfigured settings.
- A full installer MSI (Antivirus, Web Filtering, VPN, Application Firewall, Vulnerability Scan) with preconfigured settings.

To include preconfigured FortiClient settings in your custom installer, the FortiClient configuration XML file can be selected. If the backup file is encrypted, enter the password in the text field.



You can use an XML editor to make changes to the FortiClient configuration file. For more information on FortiClient XML configuration, see the [FortiClient v5.0 Patch Release 5 XML Reference](http://docs.fortinet.com) at the Fortinet Technical documentation site, <http://docs.fortinet.com>.

If preconfigured settings are not required, select *Skip*.

**Figure 110:**Optional configuration file

Select Optional Config File:

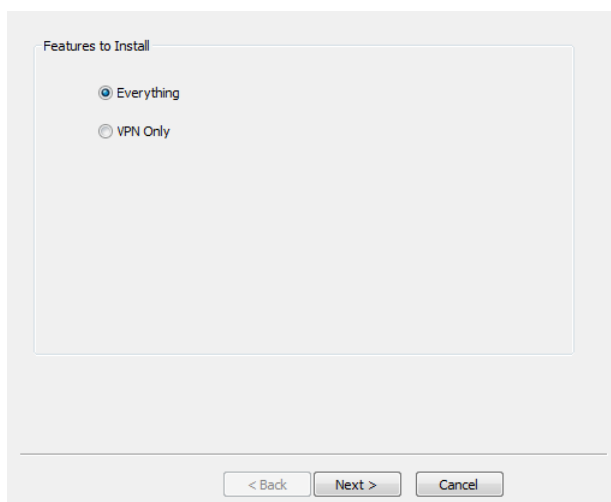
C:\Users\... \Desktop\FortiClient\FCT\_505\_Admin\_Guide\input\Backu... Clear

Password

< Back Next > Cancel

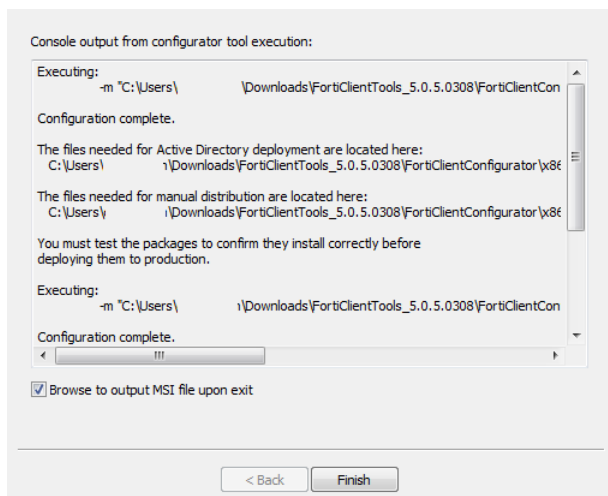
Select the installation type in the *Settings* page.

**Figure 111:**Select the custom installation type



Select *Next* to proceed to the *Execution* page. This page provides details of the MSI file creation and the location of files for Active Directory deployment and manual distribution. The tool creates files for both 32-bit (x86) and 64-bit (x64) operating systems.

**Figure 112:**Finish the custom installer creation



When you select *Finish*, if *Browse to output MSI file upon exit* is selected, the folder containing the newly created MSI file will open.

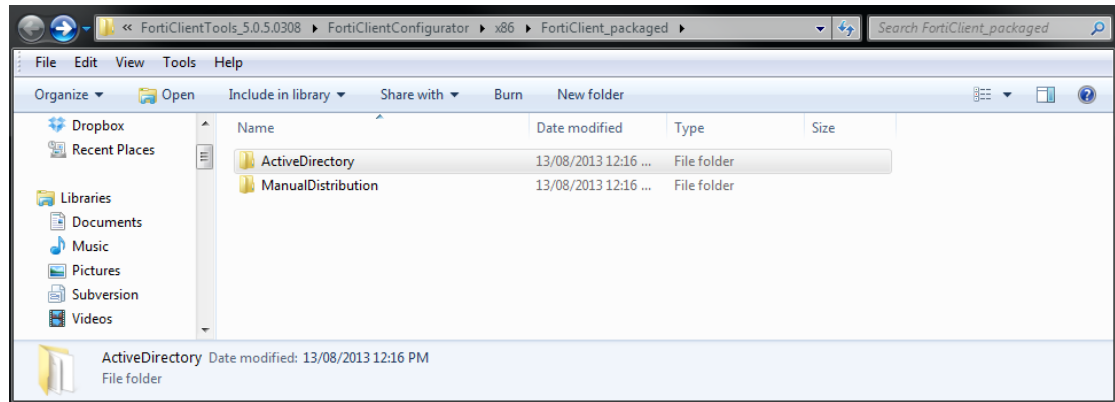


Before deploying the custom MSI files, it is recommended that you test the packages to confirm that they install correctly.

## Custom installation packages

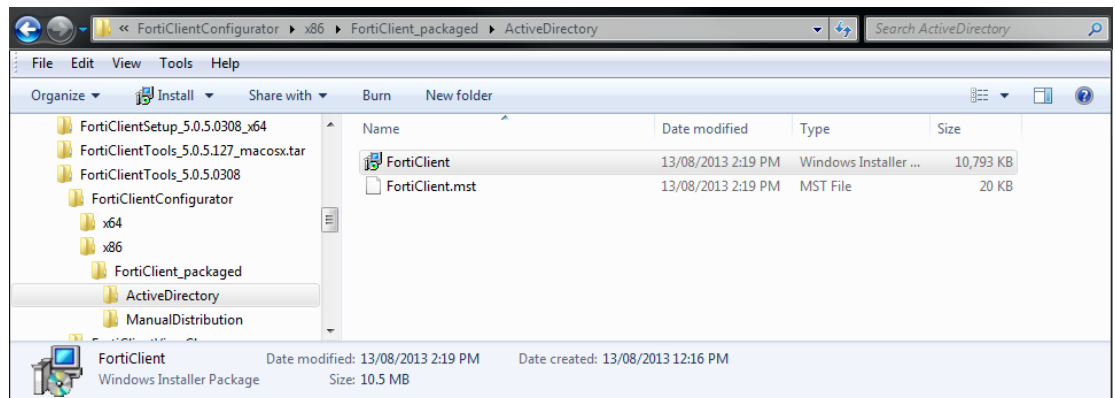
After the configurator tool generates the custom installation packages, it can be used to deploy the FortiClient software either manually, or using Active Directory. Both options can be found in the `.../FortiClient_packaged` directory.

**Figure 113:**FortiClient\_packaged folder



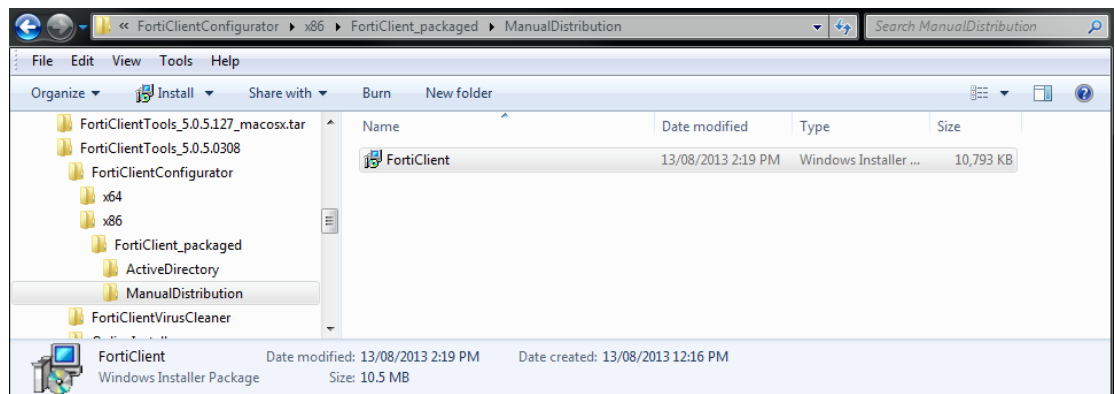
If Active Directory is being used to deploy FortiClient, you can use the custom installer with the MST file found in the `.../ActiveDirectory` folder.

**Figure 114:**ActiveDirectory folder



For manual distribution, use the MSI file in the `.../ManualDistribution` folder.

**Figure 115:**ManualDistribution folder



# Upgrade Information

## FortiClient (Windows) v5.0 Patch Release 5 upgrade information

Please review the [FortiClient \(Windows\) v5.0 Patch Release 5 Release Notes](#) prior to upgrading your client. The following information outlines supported upgrade paths and methods.



When upgrading on a Windows XP system, a warning dialog box is displayed indicating that one of the files to be updated is currently in use. Please select the **Ignore** button to continue with the upgrade.

Users with newer Windows OS versions will receive a different warning dialog box. It warns that a reboot will be required to complete the installation. Please click the **OK** button to continue with the installation.

### Upgrading from FortiClient v5.0.0

FortiClient v5.0 Patch Release 5 supports direct upgrade from FortiClient v5.0.0 or later, along with the regular manual upgrade method.

### Upgrading from FortiClient Lite v4.0 MR3

FortiClient v5.0 Patch Release 5 supports manual upgrade from FortiClient Lite v4.0 MR3 Patch Release 5.

### Upgrading from FortiClient Connect v4.0 MR3

FortiClient v5.0 Patch Release 5 supports manual upgrade from FortiClient Connect v4.0 MR3 Patch Release 5.



FortiClient v5.0 Patch Release 5 does not support upgrading from older patch releases of v4.0 MR3 (Patch Release 1 to 4).

### Upgrading from FortiClient v4.0 MR2

FortiClient v5.0 Patch Release 5 supports manual upgrade, upgrade through FortiGuard Distribution Servers (FDS), and upgrade through FortiManager v4.0 MR3 from FortiClient v4.0 MR2.

A successful software upgrade will convert and update all existing v4.0 MR2 configurations to FortiClient v5.0 Patch Release 5 formats.

An Internet connection is required for both manual and FDS software upgrades.

## Manual upgrade

FortiClient v4.0 MR2 may be upgraded to FortiClient v5.0 Patch Release 5 by running the FortiClient v5.0 Patch Release 5 installation file on the client computer. The installation file can be downloaded from the following sites:

- Fortinet Customer Service & Support: <https://support.fortinet.com>  
Requires a support account with a valid support contract.
- FortiClient homepage: [www.forticlient.com](http://www.forticlient.com)

## Upgrade through FDS

Fortinet may, in the future push a FortiClient update through the FDS. Existing FortiClient v4.0 MR2 users will receive an update notification. They may choose to accept or reject the update.

If the user accepts the update, FortiClient will proceed to complete the installation of FortiClient v5.0 Patch Release 5. If the update notice is rejected, the notification may be repeated at regular intervals.

Some users may have configured to *run updates automatically*. For such users, the upgrade will proceed without a prompt.

## Upgrade through FortiManager

FortiClient v4.0 MR2 client computers that are managed by FortiManager may be upgraded to FortiClient v5.0 Patch Release 5 by pushing the update from the FortiManager.



FortiClient v5.0 Patch Release 5 does not support use of FortiManager for central management. FortiGate devices running FortiOS v5.0 may be used for endpoint control.

After a successful upgrade, previously managed FortiClient systems will no longer be managed from FortiManager. The administrator should consider the impact of this on FortiClient distribution.

A software upgrade may be initiated by the administrator by manually uploading the FortiClient v5.0 Patch Release 5 MSI installation package to FortiManager v4.0 MR3.

The end-user receives a notification requesting permission to proceed with the upgrade. The manual package upload allows the administrator to configure the IP address of a FortiGate that will manage the clients upon completion of the upgrade.

### Push update from FortiManager to managed FortiClient agents:

1. Obtain the FortiClient v5.0 Patch Release 5 installation files from the Fortinet support website, <https://support.fortinet.com>. To download firmware images you require a support account with a valid support contract.
2. Configure the IP address of the FortiGate that will be used for managing the clients after the upgrade is completed.
3. Create a custom MSI installer file.
4. Configure *Endpoint Control* on your FortiGate device.
5. Upload the customized MSI installer file to FortiManager.
6. Distribute the MSI installer file to registered clients.

FortiClient will register to the FortiGate device after the update.

For more information on the *FortiClient Configurator GUI tool*, see “Provisioning FortiClient” on [page 24](#).



## Downgrading to previous versions

FortiClient v5.0 Patch Release 5 does not support downgrading to previous FortiClient versions.

## FortiClient (Mac OS X) v5.0 Patch Release 5 upgrade information

Please review the *FortiClient (Mac OS X) v5.0 Patch Release 5 Release Notes* prior to upgrading your client. The following information outlines supported upgrade paths and methods.

### Upgrading from FortiClient v5.0.0 or later

FortiClient v5.0 Patch Release 5 supports direct upgrade from FortiClient v5.0.0 or later. To upgrade follow these steps:

1. In the menu-bar, shutdown FortiClient v5.0.x
2. Download the online installer from either [www.forticlient.com](http://www.forticlient.com) or the Customer Service & Support portal.
3. Run the online installer to upgrade to FortiClient v5.0 Patch Release 5.

## Downgrading to previous versions

FortiClient v5.0 Patch Release 5 does not support downgrading to previous FortiClient versions.

### Uninstall FortiClient

To uninstall FortiClient v5.0 Patch Release 5, use the *Application > FortiClient > Uninstaller application*.

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